FACTORS PERCEIVED TO INFLUENCE FINANCING OF BUILD-OPERATE-TRANSFER PROJECTS IN KENYA: THE CASE OF RIFT VALLEY RAILWAYS CONSORTIUM

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DECLARATION

This Thesis report is my original work and has not been presented for award in any university.

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DEDICATION

This work is dedicated to my late parents; Lucas Okongo and Mary Aloo who before their demise made sure that I got the right education that has enabled me pursue this course.

Mr. Job Wafula and Mr. Rawline Cheti for ensuring that data was collected on time, and typing services were completed well. With different forms of assistance and support from persons mentioned. However, I take sole responsibility for any faults that might have remained.

TABLE OF CONTENTS

PAGE

LIST OF TABLES

xvii

LIST OF FIGURES

ABSTRACT

Build-operate-transfer (BOT) is one type of Public Private Partnership (PPP) model among others, which is an innovative method of financing public sector infrastructure development and service delivery. Development of physical infrastructure is prerequisite for rapid economic growth and poverty reduction, as it influences production costs, employment creation, access to markets and investment. BOT model of financing projects needs to be emphasized in the rail transport sector. It is in use but not to the extent as engaged in other transport sectors. If the model is applied well in the rail transport sector, it may have quite a number of advantages like cost effective means of transport, reduction of number of long distance vehicles that depletes our roads and covers the budget deficit. Its dominance in the infrastructure financing could be used to improve Railway service and increase cargo transportation. This study investigated the factors perceived to influence financing of Build Operate Transfer projects with the aim of determining how macro-economic factors influence financing of BOT projects, another aim was to establish the extent to which investment policy influences financing of Build-operate-transfer projects, to determine how financial and commercial factors influence financing of Build Operate Transfer projects, to assess how environmental factors influence financing of Build Operate Transfer projects, finally to establish how political and legal factors moderate the joint influence in financing of Build Operate Transfer projects. Five hypotheses have also been tested in this study; that there is no significant relationship between Macroeconomic, investment policy, financial, environmental and political factors with financing of BOT projects. The study used a mixed method research design; with a target population of 720 employees of rift valley rail consortium and government of Kenya representatives of which a sample of 338 was drawn using Yamane formula. The study used questionnaires and interview guide to collect data. Data was collected by administering questionnaire to the respondents while senior managers and government officials were interviewed. Data collected was coded and entered into SPSS version 16.0. Qualitative data was analyzed using themes and sub themes, while quantitative data was analyzed by the use of inferential statistics and descriptive statistics, of which the frequency percentages were calculated, data were cross-tabulated to establish the relationship within the variables and finally a Wald test statistic was conducted to measure the strength and direction of relationship within the variables. To test the hypothesis a Pearson chi was calculated. The findings of this study confirmed that macroeconomic factors which included variations in interest rates influence is (65%), inflation rates (63%) and debts equity ratio (65%) have a great influence to financing of BOT projects; Investment policy sub-variables such as construction period, concessional period and contract period also have a significant influence on financing of BOT projects with majority of the respondents rating each at 67%, 67% and 68% respectively. Construction costs (72%), operations cost (74%) and maintenance costs (72%). With environmental (76%) and political factors moderates at (75%). From the findings of this study, Based on the opinions of the respondents there is need for policies to be articulated on tackling the rise of interest rates in relation to BOT investments in Kenya. The study concluded that the macroeconomic factors, investment policy, financial and environmental factors had a perceived influence on financing BOT projects. Future research should further evaluate each techniques for monitoring each of these factors and potential new techniques.

ABBREVIATIONS AND ACRONYMS

APV   Adjusted Present Value

BOO   Build Own Operate

BOOT   Build Own Operate Transfer

BOT   Build Operate Transfer

BOT   Build Operate Transfer

BOTCcM   Build Operate Transfer concessional Model

CAPM   Capital Asset Pricing Model

CD   Construction Duration

CGE   Computable General Equilibrium

CP   Construction Period

DSCR   Debt Service Coverage Ratio

EBIT   Earnings Before Interest And Taxes

ECA   Export Credit Agencies

GOK   Government of Kenya

GOZ   Government of Zimbabwe

IRR   Internal Rate of Return

KRC   Kenya Railways Corporation

LIBOR   London Interbank Offered Rate

MDB   Multilateral Development Banks

MM   Modigliani and Miller

MoTC   Ministry of Transport and Communications

NEMA   National Environmental Management Authority

NPV   Net Present Value

O & M	Operation and Maintenance
OP	Operation Period
PAT	Principal Agent Theory
PPIAF	Public Private Infrastructure Advisory Facilities
PPP	Public Private Partnerships
PURPA	Public Utility Regulatory Policy Act
PV	Present Value
ROK	Republic of Kenya
SADC	Southern African Development Community
STDGR	Standard Gauge Railway
TANROADS	Tanzania Road Services
TCL	Trans Century Limited
UNEP	United Nations Environmental Program
UK	United Kingdom
US	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Build-operate-transfer (BOT) projects are attracting increasing interest with the growing thrust towards privatizing infrastructure projects in both developing and developed countries (Kumaraswammy & Zhang, 2001; Farnad *et al.,* 2014). BOT schemes in many large infrastructure projects such as roads, expressways, railways, bridges, dams, ports, and power plants are constructed and operated by private firms under a procurement system (Liou & Huang, 2008). This type of contract has also led to cost-effectiveness, timelier delivery, and a better performance and quality of the project. This is also due to the fact that the project management is more efficient in private businesses in comparison with the governmental ones. Many different types of public-private partnerships schemes are used. The most important ones include build-operate-transfer (BOT), build, operate and own (BOO), build, operate, own, and transfer (BOOT), build, transfer, and operate (BTO), build and transfer (BT), reconstruction, operate, and transfer (ROT), and operate and transfer (OT).

These types of contracts are subject to concession agreement (Liou & Huang, 2008; Khanzadi *et al.,.* 2010; Khanzadi *et al.,* 2012; Kumaraswamy & Morris, 2002). The BOT method has been used for a long time. The first important BOT contract project was the Suez Canal project that was constructed in 1854. In this contract, the private company obtained a 99-year concession from the Egyptian government for the construction and operation of the canal connecting the Mediterranean and Red Seas (Shen & Wu, 2005). In BOT contracts, the public projects is financed, designed, and

1

constructed by the project company, set up by private investors. After the construction time, in the concession period, the corporation operates the projects to repay loans, recover the investment and receive profit.

Public Private Partnership (PPP) initiatives describe a range of possible relationships between public and private sector entities in the context of developing infrastructural facilities and delivering essential services, such as energy, communication, transport, as well as water and sanitation, among others (Asian Development Bank, 2010). The South African PPP Manual defines a PPP arrangement as a contract between a public sector institution and a private sector operator, in which the latter assumes substantial financial, technical and operational risk in designing, financing, building and operating a project (Asian Development Bank, 2010).

Furthermore, the Manual refers to three specific types of PPPs: first, where the private operator performs a function usually carried out by government, such as providing water or maintaining a road; secondly, where the private operator acquires the use of state property for commercial purposes; and thirdly, a hybrid of the two. Regarding payment, the public sector could pay the private operator for services delivered; or the private operator could collect fees from service users and pay the public authority; or a combination of both systems (Asian Development Bank, 2010). In many developing countries, governments face the challenge of meeting the growing demand for essential services. However, due to limited financial resources and institutional capacity gaps, governments have found that partnership with the private sector is an attractive alternative route to increase and improve the supply of

such services. As pointed out by the United Nations' Guidebook on PPPs (2011), governments worldwide are increasingly turning to the private sector to provide infrastructural services, which traditionally, fall within the public sectors' domain.

In order to supply sufficient transportation infrastructures to enhance economic growth, a considerable investment is necessary. However, experience in many countries shows that it is difficult to depend only on the public sector to bear such a heavy burden, which has led to the development of transportation infrastructure privatization concept. Among the many ways of transportation infrastructure privatization, the Build-Operate-Transfer (BOT) model is currently receiving the most attention. However, the success of transportation infrastructure privatization is determined case by case (Chung et, al. 2006). Railway transport is one of the services in which many governments have involved private sector operators in delivery, through BOT initiatives. Furthermore, guidelines developed by the Canadian Council for BOTs, indicate that partners involved in BOT initiatives often agree to share responsibilities related to implementation and operation and management of joint projects (United Nations, 2011).

A strong BOT system should allocate tasks, obligations, and risks among the public and private partners in an optimal way. Whereas, public partners include government entities, such as ministries, departments, municipalities, or state-owned enterprises, private partners include local or international businesses with technical as well as financial expertise relevant to particular project priorities (Asian Development Bank, 2010). However, PPPs may also include nongovernmental organizations

(NGOs) and/or community-based organizations (CBOs), as representatives of stakeholders directly affected by the project (Asian Development Bank, 2010).

The establishment of PPP initiatives is motivated by three key factors; attract private capital investments to improve service delivery; increase efficiency and effectiveness in the use of available resources in project delivery, operation, and management; access advanced technological innovation; as well as accomplish sectoral reforms through reallocation of roles, incentives, and accountability (Asian Development Bank, 2010). According to Philippe and Izaguirre (2006), governments prefer PPP initiatives because they promise better project design, choice of technology, construction, operation and service delivery.

Resource limitations have been the main factor driving governments to consider PPP options for project delivery (United Nations, 2011). However, Quiggin (2004) notes that government decisions favouring PPPs are also shaped by cost factors, such as the cost of borrowing, which is higher for the private than the public sector; as well as administrative and transaction costs. In most cases, PPP options for project delivery become sensible when efficiency gains can outweigh such additional cost factors, including borrowing, transactional and administrative costs (Philippe & Izaguirre, 2006).

Farlam (2005) noted that effective PPPs are founded on complementary advantages of the public and private sectors. In this regard, a government's contribution to a PPP initiative may be in the form of capital for investment, transfer of assets, or in-kind contributions. According to Quiggin (2004), Governments may also mobilize political support as well as provide social responsibility, environmental

4

awareness, and knowledge on its part, the private sector injects its expertise in commerce, management, operations, and innovation in running joint business efficiently. Again, depending on the PPP model adopted, the private sector operator may also contribute investment capital (United Nations, 2011). A review of existing literature reveals a spectrum of PPP options. Build-operate-transfer (BOT) is one of the concession models in financing infrastructure commonly adopted by governments on low and middle-income economies.

1.1.1 Build-operate-transfer projects

Build-operate-transfer (BOT) type of PPP arrangement is a recent innovation in financing public sector infrastructure development and service delivery. Under this model, private sector operators or consortia build and operate new infrastructural assets in accordance with performance standards set by the government. However, the operator has to transfer facilities to the public authority after a specified contract period (Walker, 1993).

Related to BOT, is the sub-category of build-lease-transfer (BLT) schemes, where the law prohibits foreign firms from operating facilities considered critical for national sovereignty (Asian Development Bank, 2010). Under such circumstances, the operator builds infrastructural facilities, leases the same to the government to operate and eventually transfers it to the authority when the lease expires. Mexico is among the countries whose constitution prohibits foreign firms from operating national facilities (Walker, 1993).Another variant under BOT is design-build-operate (DBO) arrangements, in which the government and operator share responsibility for capital investments; as well as the lease-rehabilitate-operate (LRO), where the government

does not wish to dispose its critical infrastructure but wants to benefit from private sector resources. More still, BOT may also be used for plants that need extensive overhauls - in arrangements sometimes referred to as rehabilitate-operate-transfer (World Bank, 2010).

The government pays BOT operator for services from the project, at a price calculated over the life of the contract to cover its construction and operating costs and provide a reasonable return. BOT contracts are founded on the take-or-pay basis; thus, obligating the government to pay for a specified quantity of services whether or not that quantity is utilized (World Bank, 2010), which in turn, places all risks associated with demand on the public authority. Alternatively, the government might pay a capacity and consumption charges, which shares demand risks between the operator and the public authority (World Bank, 2005).

Under BOT, the contract period ranges from 20 to 30 years, during which the operator is expected to recoup its investments. Again under the model, the operational and investment risks are substantially transferred to the private operator. However, the government retains explicit and implicit contingent liabilities that may arise due to loan guarantees. The model ensures investors an adequate rate of return. The model is highly innovative and complex but, when successful, can serve as a model to attract additional private investment. So far, BOT has had limited success worldwide. Of several hundred projects initiated in developing countries, only about a dozen are operational (Walker, 1993).

1.1.2 Macroeconomic factors

These factors are inevitable and cannot be controlled by the organisation but can create great influence over organisation. These factors are at national and

international level. They include the interest rates, discount rate, inflation equity and debts. When interest rate is high during the time the loan is borrowed, lending rates becomes high hence increasing cost of projects and may increase the payback period. Discount rates also attract or deter investment. When the discounting factor is high the investment increases, when there is no discount investment reduces. Inflation affect the overall prices of materials hence leads to cost overrun and reduce the cost of investment. The decision to choose Debt/Equity in financing is more favourable to ensure intergenerational equality, but may have undesirable long-term effects. Sometimes firms prefer to use internal generated funds and uses debts as a last resort. (De Mooij, and Ederveen 2008),

1.1.3 Investment policy

Regulation and policy are normally imposed by the government to ensure the project satisfy certain requirements. The impact of imposing regulation and policy on investment is because that each of the parties has different objectives that often conflict with each other. Different pricing strategies of a BOT project are found to serve a wide range of objectives (project performances). From the private sector's viewpoint, the main concern is profit maximization, while under the government's perspective, social welfare maximization for the society is of interest. This could result in another kind of unfairness to the travellers and become a new obstruction on the implementation of a pricing policy due to public rejection. Therefore, another meaningful consideration is to minimize the inequality of benefits generated from the project (World Bank, 2005).

1.1.4 Political and legal factors

The key to a successful implementation of infrastructure project is in depth analysis of all aspects related to economic, environmental, social, political, legal, and financial feasibility of the project. For these reasons, the analysis of project feasibility decision needs a technique to include the qualitative decision factors that have the strong impact on the project (Ahmed *et al.,* 2007). BOT contracts may be complicated due to its long-term contractual obligations, multiparty involvement, moreover legal, economical, and technical framework need to be developed on large scale for successful execution of the project (Mubin & Ghafar, 2007). There are numerous awkward natures of constraints and risks faced by the various stakeholders during projects execution. In most of the projects constraints and risks become that much significant that the projects do not proceed after the feasibility analysis. Project planning in build operate transfer is a complicated decision making problem because the model has a complex financial and organizational structure, which is influenced also by the socio economic environment in the country (Irem & Talat, 2000). Change in law, corruption, delay in approval, expropriation, reliability and credit worthiness of entities are the major political and force majeure risks faced by construction industry (Wang *et al.,*.2000; Ye & Tiong, 2003).

1.1.5 Financial factors

Rapid growth poses special problems for financial managers. They must raise large amounts of cash to fund this growth, often for risky and relatively young firms. The ultimate goal of financial policy, whether a company is growing or not, is to maximize the value of shareholders' equity. In addition, the set of financial

instruments and policies available to a financial manager does not change just because a company is growing rapidly. It makes sense, therefore, to examine the financial tools available to all firms to boost market value before talking about the appropriate financial strategies for growing firms. Broadly speaking, there are two basic approaches for using finance to increase the value of the firm. Both these approaches can be illustrated by thinking of the firm as producing a cash flow "pie" - that is, total operating cash flow distributable to all investors (debt holders, stockholders, and others). The first approach takes the size of the cash flow pie to be independent of financial policy, so that the principal role of finance is to divide the pie into slices by issuing varying types of securities. The object of this division is to match the securities' characteristics with the desires of investors to maximize the total proceeds from the sale of the securities. This may affect BOT financing (Mannasoo, 2012).

1.1.6 Environmental factors

Projects frequently need to deal with environmental externalities and social justice. The man induced environment impact has increased rapidly ever since the industrial revolution. The strategies to reduce the environmental problems have however changed focus through the years. An environmental policy affects investment. The quality of the technology employed, the degree of innovation used to secure enhanced whole life costs for the user, and respect for the environment. These fundamentals are today articulated by the concept of sustainable development that encompasses social equality, the maintenance of economic growth and employment, protection and - if possible - enhancement of the environment, and prudent use of natural resources

Due to those factors, the Kenyan government admitted that the rail operation was technically insolvent (PPIAF, 2010). The Government of Kenya agreed that there was need to concession the Kenya Rail. In late October 2005 a consortium led by Sheltam Rail (Pty) Ltd (Sheltam) was named the preferred bidder and awarded 25-year concession. The two groups reportedly spent as much as $1.5 million each on their bids. The joint concession was structured legally as two separate 25-year concession contracts signed by each government with the subsidiary company in each country of the RVR Investments (Pty) Ltd ("RVR"), which acts as the overall concession holding company (PPIAF, 2010). While for regulatory and political hurdles in each country, the concessions were signed by the RVR subsidiaries with each government. Unfortunately, eight years later the operations of the RVR has proved to be wildly off the mark.RVR proved not to have sufficient expertise in actually running a railway operation to begin improving the system's revenues.

In Germany, Bilfinger Berger operated as the second-largest general contractors. With origins that date back to 1890, Bilfinger Berger has evolved from a heavy construction services firm to a global multi-service group involved in civil engineering, building and industrial construction activities, build-operate-transfer (BOT) projects, industrial and real estate services, and environmental services. The German industry experienced an upswing after German reunification in the early 1990s. It has since deteriorated dramatically, forcing Bilfinger Berger to focus heavily on diversification and international operations. The company's structure is the result of the 1975 merger of Grün and Bilfinger and Julius Berger-Bauboag. Founded in 1892, Grün and Bilfinger incorporated in 1906. Berger-Bauboag was itself the product of a 1969 merger. Bauboag was founded in 1890 as a public construction firm

named Berlinische Bodengesellschaft; it built thousands of apartments and many banks, stores, and shopping centres. Julius Berger, also founded in 1890, incorporated in 1892 as Julius Berger-Civil Engineers. In his first ten years in business, Julius Berger concentrated on railway, road, and bridge construction. He quickly earned a solid reputation with the government and received contracts for hundreds of miles of railways and roads. In 1893 alone he built 22 stretches of railroad across Germany, (Berger, 1997).

In the case of Ireland, the pickup in enthusiasm for BOT can be summarised that there was quick buy-in on the part of all BOT stakeholders, where the government made it clear that its social partners would be consulted on the approach taken to select BOT projects. Second, the government paid more attention to the efficiency benefits of PPP than to just their fiscal advantages. Third, conclusion was reached that the BOT would be a success despite some institutional challenges that had to be overcome. To facilitate the BOT process, the National Development Finance Agency of Ireland was set up to mobilise resources to finance BOT projects and to provide financial advice to government agencies seeking to form BOTs, (IMF, 2004).

Chile's experience with BOT has been successful and a significant portion of the sizeable infrastructure gap was fulfilled through this model. Chile's success with BOT has been underpinned by a solid institutional framework, well developed procedures to identify, evaluate the projects, efforts to ensure adequate sharing of risks between the stake holders, and reforms to ensure the availability of financing for projects. In the case of Mexico, most progress has been made with respect to telecommunications, ports and airports, but this mainly takes the form of privatisation.

Empirical evidence suggest that public infrastructure in Mexico has negligible effects on private sector costs, (Nataraj and Aminabhavi, 2007).

The BOT has been operating in China for over 20 years. Since the introduction of open economic policy in early 1980s, some state-owned enterprises started their reform by becoming a limited liability company. Since the 1990s, some local governments have initiated to resort to the private sector on the provision of public facilities and services. Since 2000, the BOT has become one principal strategy used by the Chinese Government in the provision of public facilities and services. The main objective of BOT is to make use of market competition in order to ensure the effective use of resources in the provision of public facilities and services. However, some local governments place too much emphasis on attracting private investments by offering even more favourable terms than the normal national status, (Wang *et al.,* 2002).

In Zimbabwe, Evolution of policy in accordance with the SADC protocol, GOZ policy since mid-1990s has been to privatize (concession) the railways. The process for the privatization of NRZ was first launched in the latter part of the 1990s with the support of the World Bank, (Graham &Harvey, 2001). The Railways Act was modified in 1997 to allow for a concession for the railway (Delmon, 2008). Consultants to support the process carried out several studies, funded by the World Bank (World Bank, 2010). The Government granted a BOT type concession for the Bulawayo Beitbridge line in the late 1990s. In 1998, the Government sought to privatize the railways based on a vertical-separation strategy (Delmon, 2008).

In Tanzania, BOT entails an arrangement between the public and private sector entities whereby the private entity renovates, constructs, operates, maintains,

and/or manages a facility in whole or in part, in accordance with specified output specifications, (Kaichena, 2010). The private entity assumes the associated risks for a significant period of time and in return, receives benefits and financial remuneration according to agreed terms. BOTs constitute a cooperative venture built on the synergy of expertise of each partner that best meets clearly defined public needs through the most appropriate allocation of resources, risks and rewards (Levy, 1996). Most BOTs implemented in Tanzania are concession arrangements for running existing enterprises with limited provisions for rehabilitation and new investments (Ngumbulu, *et al.,* 1998). It is noteworthy that in the case of services, Faith Based Organizations (FBOs) have implemented BOTs successfully in education, health and water sectors for many years, (Kaichena, 2010).

In Kenya, BOT and PPPs were discussed as one of the three crosscutting issues under the Government's Private Sector Development Strategy 2006-2010. In addition, work on establishing a PPP Unit established within the Ministry of Finance (GoK, 2006). The two key Acts of Parliament that variously spells out the legal framework for PPPs in Kenya are the Privatization Act No. 2 of 2005, which after some delay was given Presidential Assent on 13th October 2005, and the Public Procurement and Disposal Act, No 3 of 2005 assented to on 26th, October 2005, (Ong'olo, Spellman & Walker, 2006).The BOT concept is becoming a popular mode of financing transport infrastructure development and has become one of the most useful privatization strategies (Kaichena, 2010; Eredem, 2003).Despite its success in other countries, BOT in Kenya has not been doing good (PPIAF, 2010).

1.2 Statement of the Problem

Build Operate Transfer approach to finance infrastructure projects has many potential advantages. The use of private-sector financing to provide new sources of capital, thus reducing public borrowing and improving the host government's credit rating, accelerate the development of projects that would otherwise have to wait for scarce sovereign resources, the use of private-sector capital, initiative, and know-how to reduce project construction costs and schedules and to improve operating efficiency. The allocation of project risk and burden to the private sector that would otherwise have to be undertaken by the public sector, from as severe shortage of good transport network infrastructure that ripples to other neighbouring East African countries, considering Kenya being the main economic driver of the region. The government of Kenya entered in a concessional agreement with the rift valley railway under BOT financing. Operational Responsibilities to covers the provision of freight services over the entire rail network and passenger services at a specified frequency in particular sections of the network in Kenya alone (PPIAF report 2013).

The freight concession was supposed to last 25 years and the passenger concession for five years in the case of Kenya. The concession companies were also to be responsible for the rehabilitation and maintenance of all assets to specified standards and for the achievement of minimum investment levels and traffic growth targets stipulated in the concession contracts. The concession companies were to make payments to the respective governments of concession fees for use of the conceded assets off entry fee of $3 million to Kenya and $2 million to Uganda. In addition, an annual variable fee was to be paid, amounting to 11.1% of each

concession company's gross freight revenues. In the case of the passenger business in Kenya, the concessionaire agreed to pay the Government of Kenya a flat, annual fee of $1 million. Expected Investments & Business Growth over the first five years of $5 million, investments were to focus on upgrading and rehabilitating the main rail line and rolling stock, growing the business volume by 75% by year five, and maintaining it at 60% of GDP growth thereafter (Contract Agreement, 2006).

However, 10 years since the granting of the concession, RVR's performance has failed to live up to the expectation of Kenya governments on what is attributed to the lack of financial and technical muscle on the side of the lead investors. The government of Kenya has not received concession fees for use of the conceded assets of entry fee of $3 million from 2006, 11.1% of each concession company's gross freight revenues payable annual is still pending 10 years past the required date, expected investments & business growth over the first five years of $5 million has not been realized, growing the business volume by 75% by year five was not met, while cargo volume at the port of Mombasa has shot up to over 19 million tones as at the end of 2014 from seven million tonnes in the 1980s, volumes transported by RVR have declined from 4.8 million tonnes to 1.5 million tones. This is against the anticipated 22 tones per axle. This means about 90% of cargo destined for Uganda, Southern Sudan, Rwanda, Burundi and other parts of Democratic Republic of Congo is transported by roads. It represents wastage of roughly 3.3 million tone daily totalling to 12 million tones annually (PPIAF report 2013).

There is increase of the long distances vehicle estimated to be 10 trucks every kilometre totalling to 4800 tracks a day on the roads blamed for the destruction of

roads, despite construction of 1,063 km of new roads, rehabilitation of 40,500 km of existing ones as recorded since 2006 (Kamau, 2009), the potential disadvantages of financing Build Operate Transfer projects which undermine Rail infrastructure development and give advantages to other mode of transport, can be combated by understanding the factors perceived to influence financing of BOT projects, which will attract investors in these area .

1.3 Purpose of the Study

The purpose of this study is to establish factors perceived to influence financing of build-operate-transfer projects in Kenya, the case of rift valley Railways consortium.

1.4 Objectives of the Study

The study was guided by the following objectives: To;

1. Determine how macro-economic factors perceived to influence financing of BOT projects in Kenya.

2. Establish the extent to which investment policy perceived to influence financing of BOT projects in Kenya.

3. Determine how financial factors perceived to influence financing of BOT projects in Kenya.

4. Assess how environmental factors perceived to influence financing of BOT projects in Kenya.

5. Establish how political and legal factors moderate the perceived influence of macroeconomic factors, investment policy, financial and commercial factors and environmental factors and financing of BOT projects in Kenya.

16

1.5 Research Question

The study answered the following research questions: -

1. How do macro-economic factors perceived to influence financing of BOT projects in Kenya?

2. To what extent does the investment policy perceived to influence financing of BOT projects in Kenya?

3. How do financial factors perceived to influence financing of BOT projects in Kenya?

4. How do environmental factors perceived to influence the financing of BOT projects in Kenya?

5. How do political and legal factors moderate the perceived influence of macroeconomic factors, investment policy, financial and commercial factors and environmental factors and financing of BOT projects in Kenya?

1.6 Research Hypotheses

The study tested the following null research hypothesis:

H_0 There is no significant relationship between perceived macro-economic factors' influence and financing of the BOT railway projects in Kenya.

H_1 There is significant relationship between perceived macro-economic factors' influence and financing of BOT railway projects in Kenya.

H_0 There is no significant relationship between perceived investment policy's influence and financing of BOT railway projects in Kenya.

H_1 There is significant relationship between perceived investment policy influence and financing of the BOT railway projects in Kenya

H_0 There is no significant relationship between perceived financial factors' influence and financing BOT projects in Kenya

H_1 There is significant relationship between perceived financial factor's influence and financing BOT projects in Kenya

H_0 There is no significant relationship between perceived environmental factors' influence and financing BOT projects in Kenya

H_1 There is significant relationship between perceived environmental factors' influence and financing BOT projects sin Kenya

H_0 There is no significant relationship between political and legal factors in moderating the perceived Macroeconomic, Investment policy, Financial and Commercial, environmental factors and financing of BOT projects in Kenya

H₁ There is significant relationship between political and legal factors in moderating the perceived Macroeconomic, Investment policy, Financial, Environmental factors and Financing of BOT projects in Kenya.

1.7 Significance of the Study

The following constituents will benefit from the study findings;

1.7.1. Government

Based on the findings of this study it is hoped that the government will benefit from private sector's provision of sources of capital thus reducing public borrowing which will improve the Government's credit rating, accelerate the development of the projects that would otherwise have to wait for scarce sovereign resources.

It will also reduce the burden of project risk to the private investors which would otherwise have to be undertaken by the public sector and in a way enhancing provision of better infrastructure that facilitate economic growth and development.

1.7.2. Concessioners

Due to huge infrastructure projects, concessioners will enhance their reputation rating within local and international markets and therefore uplift their credit worth among lending institutions. This also equips them with the necessary requirements in terms of cash that will fast track timely project completion. Investing in such huge projects will provide the concessioner with time to accrue profits as regards contracts signed before the projects are began with the respective governments over the stipulated period of time before the end of the concession period and project handed over to the third party without liability.

1.7.3. Public

Provisions of infrastructure through BOT will avail improved means of transport, production, communication, labour and recreation to the public while at the same time offering opportunities to access markets and thus injecting economic growth within the rural set up at a cheaper cost. Contributions by private sectors injects foreign currency in a country hence improving the value of the local currency, thus reduction of taxations which enhances savings and reduction of interests rates form local financial institutions.

1.8 Delimitation of the Study

The study restricted its self to investigation of factors influencing financing of build operate transfer projects in Kenya the case of the rift valley railway. Railway transport plays Avery important in transporting heavy cargo at a cheaper cost .one of the factor investigated was macroeconomic. Macroeconomic has been found to behave consistently favourable or unfavourable toward financing build operate transfer. Macroeconomic are found nationally and internationally, they include interest rate, inflation, debt and equity ratio and they charge as arrest of change in the environment. The macro-economic factors were large and therefore could not be studied wholly. This study narrowed the macro-economic factors to; interest rates, inflation rate, debt and equity ratios.

The study sample was drawn from the consortium staff in Kenya and left out their Uganda's counterparts. This was because of the time required to complete the study. The study only covered the senior managers, operation heads, technical staff, and the Kenya railway monitoring staff, officials of the ministry of infrastructure and

communication and the ministry of finance owing to their wide knowledge in the concession matters.

1.9 Limitation of the Study

The following were the limitation of the study; the study confined to workers of the consortium in Nairobi at the time of the study and the results can only be generalized to cover other consortiums. The study was not funded, thus resource available was a limiting factor in terms of distance and are covered. However, sample taken ensured representation. This was done by following scientific sampling method. Time was also major limiting factor given that the work was to be completed within three (3) years; however two research assistants who were through trained were used in data collection. This ensured that data was collected as fast as possible without compromising the quality of the study. Both the Two research assistants were master's degree holder at the time of data collection. though there are many factors that may influence Financing of Build Operate Transfer projects the study narrowed down to only four factors and that was macroeconomic, investment policies, financial and environmental factors and finally studied only one model of financing that is Build Operate Transfer out of the existing more than (10) models.

1.10 Basic assumption of the Study

The study assumed the following; that the instrument for data collection measured the desired constructs. The study was also based the assumption that build operate transfer is an effective model of financing projects. The study also assumed that the technical staff, rail monitoring staff, senior managers and the government representative gave true and honest opinion about financing build operate transfer

through research instruments. The study also assumed that rift valley railway was financed through build operate transfer model. The study also assumed that concessional contract was to be in operation to end of the (25th) fifth year.

1.11 Definition of Significant Terms used in the Study

Financing Build-Operate-Transfer projects: A private sponsor finances the design, construction, maintenance and operation of a public project for a specified concession period, at the end of which it will transfer ownership to the Government, after recouping its costs and achieving profits.

Environmental factors: Identifiable elements in the physical, cultural, demographic, economic, political, regulatory, Technological environment that affects the survival, operation of Rail transport in Kenya.

Financial and commercial factors: These are risk associated to cost of construction, operation, and maintenances or refurbishing the Rail line including all stations along the railway line from Mombasa to Kisumu and ferry services along the ports Mombasa and Kisumu. How vulnerable the financial system is to external or internal volatility. This includes the performances of banks, equity indices and fixed-income securities, as well as an assessment of the depth and volatility of the country's capital markets.

Investment policy: Means Kenya government regulation or law that guides investment on the BOT financing on Construction period

Concession period Contract period, encourages or discourages foreign investment on Rail Transport Infrastructure.

Macroeconomic factors: Means Economic factors that are the likelihood that fundamental weaknesses in Kenya economy will cause adverse developments to BOT financiers. These will include interest rate discount rate, debts/ equity ratio, inflation

Political and legal factors: Are risks that are the likelihood that governmental or bureaucratic inefficiencies, societal tensions, an inadequate legal system or international tensions will cause adverse developments for BOT investor. Political risk comprises the stability of a government and society; the effectiveness of international diplomatic relationships; the reliability and integrity of the legal system and business infrastructure; the efficiency of the government bureaucracy; and the appropriateness and effectiveness of the government's economic policies.

Provision of rail transport infrastructure: The availing of efficient railway system of transporting passengers or goods in Kenya, by the Government using the train and Ferry

Rift Valley Railways Consortium: The group of Companies that offer finances to fund the construction, rehabilitation and building the train station along the railway line from runs Mombasa to Kisumu

1.12 Organization of the Study

This study comprises of five chapters: Chapter one covers the background of the study in different dimensions followed by the statement of the problem that highlights the problems explored by the study, purpose of the study, five objectives of the study, research questions and the study hypotheses. This is followed by how the study will benefit different constituents brought together by the problem, the geographical boundaries, population covered and the time period involved in the study, factors that influenced the study during data collection, study assumptions, and how the terms used in this study are defined and finally how the chapter is organised.

Chapter Two covers literature review under the following subtopics, concept of Financing Build Operate Transfer, theories of build operate transfer macroeconomics and financing build operate transfer, investment policies and build operate transfer, provides a review of theoretical and empirical literature focusing on the following the concept of BOT financing of projects, macro-economic, investment policy, financial and environmental as well as political and legal factors and financing of build operate transfer, conceptual framework and finally a summary of literature review.

Chapter Three covers research methodology under the following themes; research paradigm, research design, target population, sample and sampling procedures, research instruments, pilot testing of the instruments , validity and reliability of the instruments, data collection procedures, data analysis procedures, Ethical issues and Operationalization of variables.

Chapter four presents findings of the study which have been discussed under thematic and sub-thematic section in line with the study objectives. The thematic

areas include; demographic characteristics of the respondents, macroeconomic factors, investment policy, financial and commercial factors, environmental factors and political and legal factors. Finally, chapter five covers summary of findings conclusions and recommendations and areas for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature which is related to the study based on the following thematic and sub-thematic areas; the concept of build-operate-transfer (BOT) projects, theories of build operate transfer. Factors influencing financing of build operate transfer Macro-economic factors and financing of build operate transfer, financial and financing of build operate transfer, investment policy and financing of build operate transfer, environmental policies and financing of build operate transfer as well as political and legal factors and financing of build operate transfer projects. This review is followed by theoretical framework; a synthesis of the empirical and theoretical literature culminates in a conceptual framework within which requisite data was analyzed, Operational definition of variables and finally a summary of literature review.

2.2 The Concept of financing Build-Operate-Transfer Projects:

In literature BOT model project is defined as a project based on granting of a concession by a public utility to a private sector consortium or concessionaire who is required to *build, operate* and *transfer* the facility or plant in operational condition and with no obligation to third parties at the end of concession period, (Kumaraswamy & Zhang, 2001).Yang and Meng (2000) defines BOT as a project delivery method, which applied to finance new infrastructure projects with private sector participation during the concession period. In the BOT scheme, the concessionaire is responsible for the financing, design, construction, and operation of a project during the concession period, and after that, transfers the project to the

client. The concession period is predetermined in a contract, generally 30 years; in many cases, the clients are governments.

In Kenya the Privatization Act No. 2 of 2005 which after some delay was given Presidential Assent on 13th October 2005, and the Public Procurement and Disposal Act, No 3 of 2005 assented on 26th October 2005. It should be noted that according to Section 4 (1) (b) the Act applies, inter alia, to contract management; for example, services that the government may wish to contract other entities to undertake on its behalf. The Act specifically prevails where there are any conflicts with other Acts regarding public procurement. With specific regard to PPPs, this is recognized by the Act under Section 92 (1), which states that "A procuring entity may use a procurement procedure specially permitted by the Authority which may include concessioning and design competition. For the purpose of this section (a) "concessioning" means a procurement that encourages the mobilization of private sector resources for the purpose of public financing, construction, operation and maintenance of development projects and may include build-own and operate, build-own-operate and transfer, build-operate and transfer (GoK, 2012).

2.3 Theories of BOT financing

There are various theories on financing of BOT. The following were found to be relevant to the study: The theory of BOT Concession Contracts by Williamson (1975); Pecking order theory by Myers (1984) the game theory by Von-Neumann (1944). The study was based on these theories since they all contribute to the financing of BOT projects, under which the private sector builds and operates an

infrastructural project for a defined concession period and then transfers it to public authorities.

2.3.1 Theory of BOT Concession Contract

The proponents of this theory include Williamson (1975). The theory discusses the choice for BOT concessions when governments and firm managers do not share the same information regarding the operation characteristics of a facility. The theory views BOT financing from a trade-off between the government's shadow costs of financing the construction and the operation of the facility. It also views PPP as BOT concession under which the private sector builds and operates an infrastructure project for a defined period and transfers it to public authorities. The theory notes that financing of infrastructural facilities anchors on the possibility of limit public spending by shifting investment costs to the private sector.

While contributing to the theory, Hart (2003) argued that to induce private investors to sink their capital into expensive infrastructure projects, governments must leave rents to the concession holders during their activities. The function of the government and its powers are reduced to minimal. Literature in this area has focused on the optimal way to auction monopoly contracts Harstad and Crew (1999).According to Guasch *et al.,* (2006) the theory of financing can assist in conceptualizing specific features influencing BOT as a method of financing projects. This framework takes into consideration the changing nature of financing methods in light of macroeconomics, financial, commercial and political conditions.

2.3.2 Pecking Order Theory

Myers (1984) propounded the "pecking order" theory of financing. The theory postulates that instead of using equity to finance investment projects it is be better to use less sensitive sources of funds. Retained earnings are the most preferred, with debt coming next and finally equity. In literature Goldstein, and Leland, (2001), Nyborg (1995) posits that to be consistent with a number of stylized facts concerning the effect of issuing different types of security on stock price and financing choices. However, in order to derive them, strong assumptions such as overwhelming bankruptcy aversion of managers are often necessary. Dybvig and Zender (1991) also assume suboptimal managerial incentive schemes. In this regard, if managerial incentive schemes are chosen optimally the pecking order theory irrelevance results can hold even with asymmetric information.

Jensen and Meckling (1976) pointed to two kinds of agency problems in corporations. One is between equity holders and bondholders and the other is between equity holders and managers. The first arises because the owners of a levered firm have an incentive to take risks; they receive the surplus when returns are high but the bondholders bear the cost when default occurs. Diamond (1989) has shown how reputation considerations can ameliorate this risk shifting incentive when there is a long time horizon. The second conflict arises when equity holders cannot fully control the actions of managers. This means that managers have an incentive to pursue their own interests rather than those of the equity holders. Grossman and Hart (1986) have shown how debt can be used to help overcome this problem. In the study financing of BOT projects is seen largely to depend on assumptions that factors affecting financing

29

are influenced by construction, contract period, operation and maintenance costs which both may affect profits of firm investing hence returning the burden to the government. Based on the pecking order theory the study will investigate those factors as components of financing of BOT projects.

2.3.3 Games Theory

This theory was formulated by Vonneumann (1944). Myers (1984) is also a key proponent of this theory and he also called it "conflict analysis" or "interactive decision theory". The use of game theoretic techniques in this field of financing has also allowed it to move ahead significantly. Rasmusen (2001) noted that the first contributions in a game theoretical vein were signalling models. Game theory provides simple tools, which allow observing dependencies between entities activity. Its greatest worth is contribution to explaining the mechanism of competition and co-operation. Most of the relationships between entities are neither strict conflicting nor strict co-operative. Using the terminology of the game theory, most of the social interactions are non-zero-sum games, which mean games between players whose interests aren't either totally opposite or fully coherent. In other worlds between players, there exists rivalry that does not exclude possibility of co-operation.

The solution of the game representing Nash equilibrium is the consequence of individual rationality principle. Rationality is the property of maximizing one's pay-off and taking into account the fact that the opponent is also rational and also is trying to maximize his payoff (Rapoport, 1988), as in this case the government would require good services without contributing initial capital while the concessionaires would want good returns at a lower investment. Rationality causes a conflict between

the self-interest and collective interest. According to the logic of the group rationality, represented by Pareto optimum, we shouldn't accept a solution if there is another one, more effective for all players or more effective for one player but not less effective for another player, (Straffin, 2004; Boone & Macy, 1999).

BOT (Build – Operate – Transfer) model can be identified as sequential games include three main phases. Generally we can look at the BOT as at a four-stage model including: preparation of enterprise, implementation, design and construction, operating and maintenance. So many stages of realization of BOT scheme can suggest that it makes sense to interpret BOT as a game due to a set of interactions involving players with a complex character, particular strategy, behaviour, interest and pay-off. Thus a very important thing is to analyze all potential risks and benefits (pay-offs) associated with realization of a given activity as a BOT and their distribution between parties. Considering BOT as a game must take into account that it is played in the environment with imperfect and incomplete information. That means that players must take steps to maximize their bargaining power by enlarging their access to information. In public service decision making the most important is following issues (Scharle, 2002).The emphasis is that the process of decision making in public sectors is more complex and unstable than in the case of private sector. The separation of decision making and decision executing, and unclear distribution of responsibilities between them enhance the risk associated with BOT. The political risk is one of the main causes why private sector avoids BOT. On the other hand there is often no social acceptance for this kind of delivering of public goods. In some cases it is reasonable, because in given countries there is high level of corruption. But in most cases the problem is the result of ignorance. The lack of necessary knowledge precludes an

31

effective use of this hybrid form of delivering public goods. BOT isn't easy and does not always work well. But if we stop treating state and market as an alternative mechanisms for solving social problems with the availability of public goods, we can gain more.

The co-operation in BOT means that state and its commercial partners go in the direction: to enhance social welfare. Due to a lot of entities engaged in BOT, such as government (central state or local) authority or a government-owned enterprise, project sponsors, construction companies, providers of necessary equipment, plant operators, insurers, must co-operate with one another. This co-operation in some cases could be examined as a game. The better understanding of BOT games can decrease costs and potential losses. Because of relatively short time of functioning of BOT we should carefully prescribe obligations and rights of every partner and think about BOT as a co-operation, not rivalry. The behaviour of the partners in the concession is well depicted in figure 1;
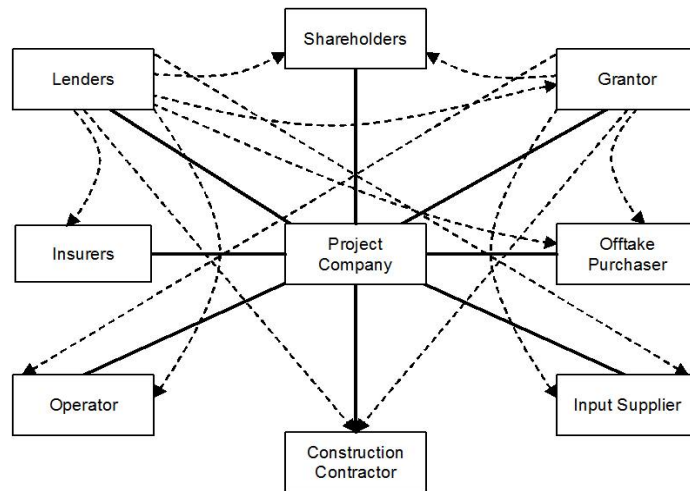
Source: World Bank (2005)

Figure 1: Games Theory of Concessional Contract DFUS Model

2.4 Factors Influencing the Financing of BOT Projects

These factors can be categorized under five groups, including macro-economic, investment policy, financial, environmental as well as political and legal factors, and are discussed under the following sub-sections.

2.4.1 Macroeconomic factors and financing BOT projects

Macro-environment factors are inevitable and can create great influence over the organisation. These factors are located in national and the global levels outside the organizational and have physical influence on the business (Moll, 2010). A study by Maganga and Abdi (2012) observed that an exploration of the determinants of private investment for the last three decades reflects that the tempo of capital accumulation from the private sector seems to have been determined mainly, in the short term, by public investment, bank credit and the real interest rate.

The analysis shows evidence of a displacement effect crowding out coming from government investment decisions, by competing for resources that could have been utilized by the private sector. DeLong and Summers (2012) found out that investment is affected by many macroeconomic factors that are beyond the organisation. Tatiana and Portes (2013) pointed out that investing in rail transport infrastructure brings effects both in the short run, and in the end. The situation in Kenya has not been different from that in United Kingdom and many Africa countries since similar factors do affect investments (Ong'olo, Spellman & Walker, 2006).

Mannasoo (2012) investigates the role of the recent global financial crisis on interest spreads in Estonia. The approach follows works of Ho and Saunders (1981) in which the spread is decomposed into a pure spread and the remaining component that is explained by market structure, regulation and idiosyncratic bank factors. The pure spread is explained by the degree of bank risk aversion and the market structure of the banking sector. The volatility of money market interest rates is found to have a long-run impact on the spread.

Afanasieff *et al.,* (2002) applies the two-step approach of Ho and Saunders (1981) to study the interest rate spread in Brazil by estimating an unbalanced panel data model of 142 commercial banks using monthly data from February 1997 to November 2000. In the first step, it estimated a panel model with time dummy coefficients, which are the then, used in the second step as the dependent variable on which a measure of interest rate risk and selected macroeconomic variables are used as repressors. Unlike most studies that define the interest rate margin based on interest income and interest expenses, Afanasieff *et al.,* (2002) defines the spread on the basis

of lending and deposit rates as posted by banks. They find that the spread is higher the longer the concession period is, the larger the operating costs, bank leverage, ratio of service revenues to operational revenues and ratio of non-interest bearing deposits to total operating assets.

A study by Kobina (2010) on sensitivity of loan size to lending rates evidence from Ghana's microfinance sector examines the combined effect of interest rates and poverty levels of microfinance clients on loan size Cross section data on 1800 households (698 clients and 1102 non-clients) from Ghana was used to test the hypothesis of loan price inelasticity. Quintile regression and variants of least squares methods that explore endogeneity were employed. The expected inverse relationship was observed for the poorest specifically, respondents between the 20th to 40th quintile range. Concentrating on different poverty groups of MF I clients, we observe that a change in interest rate leads to varying responses for the demand of loan amount. In view of this, interest rate as a component of macroeconomic risk was targeted in line with its role in determining finance.

Bakatjan, *et al.,* (2003) study on macroeconomic factor affecting the market and the link between Canadian real exchange rate and aggregate investment found that macroeconomic influences were insignificant. They pose a challenging question as to why investment in a small open economy like Canada's would be insulated from exchange rates. Grimsey and Lewis (2005) compared investment sensitivity in the United States and Canada for the period 1970-93. Due to a high degree of openness of Canadian transport industries, investment in Canada turns out to be the least responsive to exchange rate. He went on to stress that one research stream focuses on

the relationship between exchange rate fluctuations and investment. In this regard, the study found that a real depreciation (appreciation) of the U.S. dollar was likely to generate an expansion (reduction) in rail transport investment in the 1970s, but that the opposite pattern prevailed during the 1980s.

Tatiana and Portes (2013) agreed that exchange rate fluctuations and investment becomes true during a crisis that is when monetary policy is constrained by the zero lower bound when more businesses and households are credit constrained.Several empirical studies that have been undertaken to identify the possible determinants of inflation in Nigeria and elsewhere have identified exchange rate as another inflation determining variable.

Honoham and Lane (2003) for instance, reported a variety of regressions, explain annual inflation differentials across the Eurozone over the period 1999-2001, and found a substantial role for the variation in nominal effective exchange rate movements in explaining divergent inflation rates. Honoham and Lane in a related study confirm that exchange rate matter for EMU inflation rates during the periods of Euro appreciation (2002-2003) as well as during the periods of Euro depreciation (1999-2001). Aigbokhan showed that the level of real exchange rate was a primary determinant of the rate of inflation in Mexico during the 1980s and 1990s. Chhibber developed a detailed econometric model, which takes into account both monetary and structural factors while investigating the causes of inflation in Zimbabwe. Their investigation shows that monetary growth, foreign price, exchange rate, interest rate, unit labour cost and real income, are the chief determinants of inflation in developing countries.

Elbadawi (1990) writing on inflationary process, stabilization and the role of public expenditure in Uganda showed that the precipitous depreciation of the parallel exchange rate was the principal determinant of inflation. This conclusion obviously agrees with the findings of Chibber and Shaffik (1990) with respect to Ghana. A major factor identified in almost all the papers is the strong influence of inflation as a propagating factor in inflationary process. Since the incidence of inflation is synonymous with fixed exchange rate regime, a case for policy of flexible exchange rate was suggested as an anti-inflation measure. Supporting this conclusion, Owosekun and Odama (1975) argued that flexible exchange rates would minimize the impact of inflation. Most of these studies were based on the findings of other study as data was collected from secondary source, this study will collect data from the primary source as secondary source reflects others finding.

Aghdaei and Ghasemi (2012) carried out a study on the effect of equity ratio on market value of stock firms by using the liquidity in Iran. The main goal of the study was to realize the nature of the relationship between the debt ratio and financing of transport. The major findings were that the level of financial system risk combines insurance and non-insurance financial system risk. These views has been supported by Svensson and Eklund (2010) who noted that macroeconomic uncertainty and private investment in rail transport in LDCs can affect investment through different channels, some of which operate in mutually opposing directions.

Frontier Economics (2012) has different views that investing in particular types of infrastructure does not offer quantifications of the macroeconomic impacts of investment in infrastructure and sometime do not affect financing from external.

Frontier points out that those studies were not empirical and that the studies were based on findings of other research. The validity of the study was therefore, depended on the quality of the other studies. Bellier and Zhou (2003) noted that BOT projects were procured through competitive public bidding. Most of the project companies were foreign enterprises, which reduced potential conflicts of interest. However, they assert that BOT projects did not have satisfactory outcomes and other arrangements were still to be explored. Kumarasawamy and Morris (2002) affirmed that weaknesses in the regulatory framework remain an obstacle to broader private participation in infrastructure financing.

Barry (1994) Along with the economic prospects of the project, it was necessary to assess the reputability of the promoter. Recently settled, sparsely populated regions were prime locations for fly-by-night operators. Promoters could strike sweetheart deals with construction companies, siphoning off resources and saddling the project with insupportable debts. Llanto (2008) in instances when the government is a major purchaser of a BOT output, it commits to a steady revenue stream to make the project viable, thereby attracting both lenders and equity investors to provide funding to the project. For instance, the government could pledge a "minimum off-take" or "take or pay" guarantee for the power generated from BOT-built power plants or guarantee ridership in a rail project in order for the concessionaire to be able to pay off both debts to lenders and dividends to equity investors.

Infrastructure expansion is critical for sustaining rapid growth and employment generation in Asia's giant developing countries (Canning *et al.,*. 2000). Given the fungibility of revenue once raised, financing options to support the already large and expanding public infrastructure investment becomes important not just for raising revenue, but also in terms of macroeconomic impacts (Botman *et al.,* 2006). In the current, study two alternative financing modes will be considered: financing through equity and debt financing because the operation of the railways is expected to yield income during the period of concession. This finding will check whether the profitability of the consortium is affected by micro-economic factors within the concession period.

A study by Canning *et al.,* (2000) on debt financing in India sought to determine how debts and equity ratio influence private financing. The finding reveals that high existing stock of government debt in India renders debt financing the least attractive mode of financing and hence it is insignificant. Weisbrod, (2008) affirm that public-private partnership has emerged as a vital option for infrastructure financing. Liao, (2000) points out that some model parameters, such as the output elasticity of infrastructure, which are central to the simulation results reported, have been taken from cross-country studies. Brooks and Zhai, (2006) found that obtaining country-specific estimates of these parameters would significantly improve the empirical and policy relevance of the model simulations. Second, Liao noted that the study model and simulations did not consider financing policies. The current study has in addition incorporate debt and equity policies and their relationship with plans for BOT financing.

Project sponsors are the investors in the project company that are likely to be providing expertise and some of the services to the project company (such as construction or operations services). Sponsor funding is generally through equity contributions in the project company through share capital and other shareholder funds (Liao, 2000). Equity holds the lowest priority of the funding contributions in a project, therefore the other contributors (such as lenders) will have the right to project assets and revenues before the equity contributors can obtain any return; or, on termination or insolvency, any repayment. Weisbrod, (2008) consents that equity contributions bear the highest risk and therefore potentially receive the highest returns. Llanto, (2008) argues equity contributors in project financed transactions might include the project participants, local investors, the host government, the grantor, other interested governments, institutional investors and bilateral or multilateral organizations. Equity investors will want to pay in their equity investment as late as possible in the construction period, even wholly back-ended to save costs and improve their aggregate equity return. Lenders will prefer front-ended or pro rata equity investment to maintain their cushion ratios on debt drawn-down (Liao, 2000). Lenders may want a bank or third party payment guarantees on equity payments to be made later in the project to ensure they will be available at the time agreed (Elgar and Cheltenham, 2007).

Delmon (2008) noted in Project Finance, while the liability of project sponsors is usually limited to the level of their shareholdings, lenders will seek limited recourse to the assets of the shareholders in certain specified situations, up to a limited maximum amount and over a limited period. Elgar and Cheltenham,(2007) states that the extent to which some recourse is provided is commonly called funder support,

where some portion of the project involves more risk than another, recourse may be provided to the lenders to the extent of that risk or until that high risk period has passed. Alternatively, the amount of recourse allowed to the lenders may be limited in value. Delmon (2008) agrees with Elgar and Cheltenham that in project financing, the construction phase involves particular risks for the lenders. The value of the project against which the lenders provide financing is usually in the operation and the payment stream supported by the concession agreement rather than the physical assets of the project. In a new build project, there will be no revenue stream until the operating period. As the lenders will bear more risk until construction is complete, sponsor support is sometimes provided for the period up to completion of the works. It may also be provided for the period until certain financial ratios are achieved, or until the works have achieved a period of operation at a certain level. This study looked at construction period as a factor which has been ignored in many studies as period take determines profitability of the project and timely delivery back to the Government.

A study by Quintana *et al.,* (2010) on infrastructure investment in Mexico, using an experimental design found a progress on estimating the causal effect of infrastructure investment. Specifically, the study randomly assigned some railway lines to be used by passenger and others not to be used in the Mexican city of Acayucan. Their analysis suggests that such infrastructure investment substantially raised housing values on the newly paved railway line, which reflects an improvement in living standards, as well as provided benefits for home values on nearby streets. The rise in housing values on affected streets significantly exceeded the cost of paving. Edward Gramlich argues that the greatest return on investment can be

garnered from spending on maintenance of existing railway lines. Citing data from the Congressional Budget Office, However, Graham and Harvey (2001) suggest that the economic benefits from various infrastructure projects vary widely. Additionally, even if previous infrastructure investments had economic benefits, it is not clear that policymakers should expect the same rate of return for subsequent infrastructure investments.

The financial discount rate represents the opportunity cost of capital (Brealey, Myers, 1996; Brigham, 1995). The opportunity cost of capital is the cost of investing in one project rather than in another – alternative – one. The loss incurred from opting for the first project and not the second – alternative – one is the opportunity cost. And vice versa, making gains in the second project and not in the first one represents the capital gain opportunity. Therefore, the financial discount rate is used in the process of evaluation of the performance of an investment option. That is the reason why it is important which financial discount rate will be used when judging the acceptability of investment opportunities. It is possible to opt for: - weighted average cost of capital that is weighted average cost of all sources of finance of a project. The choice of this discount rate implies the preference to derive the expected rates of return from third party (loan, bonds) or own (capital) sources of finance taking into account the relative weight of each source of finance; minimum marginal rate of return on investment that needs to be earned on an investment option. Caballero and Pindyck (1992), argued that a solution will exist if the discount rate is large enough so that the value of a firm remains bounded even if future entry is prohibited.

The literature shows that factors such as interest rates, inflation rates, debt/equity and discount rates influence on BOT financing have not been studied in isolation in Kenya, few studies exist that examine the interest spread determination. Beck *et al.,* (2010) examine developments in Kenya's financial sector with a specific focus on stability, efficiency and outreach, and use interest rate spreads as a proxy for the efficiency of financial intermediation. They base their analysis on ex post constructed spreads and decompose the spreads into different components based on a set of factors such as overhead costs, loan loss provisions and taxes. This study focused on each factor's influence on BOT financing in isolation using primary and secondary data as opposed to the use of secondary data in most studies.

2.4.2 Investment policy and financing BOT projects

An investment policy is any government regulation or law that encourages or discourages foreign investment in the local economy, e.g. currency exchange limits. As globalization integrates the economies of neighbouring and of trading states, they are typically forced to trade off such rules as part of a common tax, tariff and trade regime, e.g. as defined by a free trade pact. Investment policy favouring local investors over global ones is typically discouraged in such pacts, and the idea of a separate investment policy rapidly becomes a fiction or fantasy, as real decisions reflect the real need for nations to compete for investment, even from their own local investors. A strong and central criticism of the new global rules, made by many in the anti-globalization movement, is that guarantees are often available to foreign investors that are not available to local small investors, and that capital flight is encouraged by such free trade pacts, (McCobb and Derrick, 2014).

Waller and Ross (1997) and Bhatta (2003) in their study on transport policy in Indonesia, findings indicated that an input into policy capacity is composed of five interrelated components. These are the construction period of the railway line, the policy network environment, especially the rails position relative to other players in policy development process, the human inputs, career experience and skills (Bhatta, 2003). The information inputs, the range and quality of the data available to inform the decision-making process; and the policy levers.

According to Ng and Loosemore (2007) if the government makes tremendous changes in output speciations during construction, then the government should allow certain extension of the construction period and provide some degree of financial compensation. Manrique (2010) asserts that the construction period of the urban train began in 1989; however the implementation of the urban train could not finish in 1992 according to the studies of the AATE. The design of the project was done during previous months and the execution followed the defined terms of the design. However, the construction could not finish the original design which considered the urban rail system until the station Hospital 2 de Mayo in the city center. The economic situation of the country and the social crisis in the early 90s did not permit the completeness of the project and the suspect of acts of corruptions of some officials raise the possibility to not to finish the project. As a consequence the urban train only reached 9.8 kms of Line 1 until the district of San Juan de Miraores in the Atocongo Station in 1995. The poor construction process without correct monitoring system and the financial crisis made this project as one of the most unsuccessful infrastructure projects in Peru.

Concession period is one of the most important decision variables in arranging a BOT-type contract, and there are few methodologies available to help determine the value of this variable (Shen *et al.,* 2007). The terms of concession agreement, including tariff and concession period of the project, are often discussed intensively during negotiations (Liou & Huang, 2008). A longer concession period is more beneficial to the private investor, whereas a prolonged concession period may result in loss for government investments. On the other hand, if the concession period is too short, the investor would either reject the contract offer or would be forced to increase the operation fees in order to recover the investment costs and to make a certain level of profit. Consequently, the risk burden, caused by short concession period, would be shifted to those who use the facilities (Shen *et al.,* 2002). Generally, the investor's revenue cannot be more than the total revenue of the project in the economic life and also it should not be less than the minimum expected investment return of the investor.

Shen *et al.,* (2002) proposed an alternative model to determine a proper concession period that could safely protect the interests of both the government and the private investors. The investor's considerations in a BOT contract usually include return of the investment (ROI) or net present value (NPV). Consequently, the concession period should bring a certain level of ROI or NPV to the investor (Shen *et al.,* 2002). However, there is a major limitation in using the model, i.e., it gives no consideration to the impacts of risks on the estimation of various economic variables in the model (Shen *et al.,* 2005). The undertaking by the concessionaire of all the risks associated with the project during the concession period is a major issue of concern for all parties involved, i.e., the contractors, the sponsors, and the government. The

success of a BOT project lies in the appropriate initial risk assessment by the potential concessionaire, which provides the reasoning for a "go or no go" decision (Yiannis & Demos, 2005).

Shen *et al.,* developed a risk concession model to provide an approach for formulating the concession period considering the impacts of risks as well as the basic interests of both the investor and the government (Shen *et al.,* 2002). In this research, the Monte Carlo simulation and the Crystal Ball software package were used to determine the NPV value for each year in the life cycle of a project. A simulation model was developed by Thomas *et al.,* to assist the public partner to determine an optimal concession period. In this model, the impact of risk can be taken into account in establishing a proper concession period (Thomas *et al.,* 2007).

Thomas *et al.,* proposed a fuzzy multi-objective decision model to evaluate and establish the most satisfactory concession option for BOT projects. The complex impact of risks is considered and an appropriate concession period can be deduced by a fuzzy multi-objective decision model to trade-off the associated three concession items (max IRR, min concession period and min tariff regime) (Thomas *et al.,* 2007). Shen *et al.,* (2007) developed a model to enable the identification of a specific concession period, which takes into account the bargaining behaviour of the two parties concerned in engaging a BOT contract namely, the investor and the government (Shen *et al.,* 2005). Grimsey and Lewis (2007) agree that PPP constitute more than an outcome-driven contracting system in which the high degree of cooperation costs and risk allocation is present. Thus, many governments might

46

undertake PPP projects in infrastructure because of the potential benefits in the area of transportation.

According to Farnad *et al.,* (2014) several researches have been conducted to determine the concession period; however, all of them face some major defects. In the previous studies, the risks affecting a BOT project were not usually considered. In the few researches in which the risks are taken in to account, the probability theory has been implemented to model uncertainties. The probability theory, however, may not be a suitable choice for considering the effects of risks since the historical data are not normally available in construction projects. Moreover, the construction projects are unique and they are not normally iterative processes (PMBOK, 2004). In fact, the various features of a construction project cannot be identical between two different projects and BOT construction projects present additional features that render each project different from the other ones (Yiannis & Demos, 2005).

The decision to invest in infrastructure is an endogenous variable that is influenced by both technocratic and political forces (Gill & Kharas, 2007). Government sometimes make the myopic decision of making across the board cuts in capital expenditures, which include infrastructure investments without due regard for the productivity-loss implications of severe cutbacks. Canlas *et al.,* (2006) points out that for a variety of reasons, even if people value a service from a given infrastructure project, say, from a road or a bridge; they will hesitate to reveal the price that they are willing to pay for the service. The prospects of commercial returns arising from a 'user-pays' principle motivate private risk capital to consider investing in long-lived, lumpy infrastructure facilities. Llanto (2007) consented that to be able to realize a

47

mutually agreed-upon rate of return to investment, the concessionaire relies mainly on a user charge that is regulated. However, Button (2002) found that achieving the rate of return that would satisfy private investors will depend on, among others, the openness of the regulator on the matter of allowing cost-recovering user charges.

People who pay the administered fee can avail of the service provided by the project. Those not willing to pay are excluded. Thus, since pricing is possible, users, instead of taxpayers, pay for the operating cost. Much-needed infrastructure service is provided and the concessionaire profits from the investment (Canlas *et al.,* 2006). A highly regulated fee structure that disallows cost recovery and the generation of normal profits may create disincentives on the part of the concessionaire. Project financiers carefully assess the financial viability of the BOT project and its vulnerability to regulatory and political risks On the institutional arrangement, there is a need for a strong partnership between the concessionaire and the government granting authority throughout the period of cooperation, which is a long period of time since long-lived investment assets are involved (Canning& Pedroni, 2008).

The strength and durability of the partnership depend largely on the presence of technical, legal, and financial expertise at the level of the granting authority. Such expertise, if present, enables the government agency concerned to engage the concessionaire in meaningful discussions or dialogue on a wide range of relevant issues at project-entry level, during project construction and during project implementation or operation (Gill & Kharas, 2007). In BOT contracts, long-term obligations are committed *ex ante* while the benefits are realizable *ex post.* This creates a potential 'hold-up' problem. Williamson (1985) notes that under-investment

in such infrastructure facilities may occur because the potential investor fears the possibility of a 'hold-up,' that is, future exploitation. Williamson assumes that high transaction costs prevent some aspects of the future trade from being contracted *ex ante*. The contracting parties have to leave contingencies open to future renegotiation and, thus, contracts become necessarily incomplete. Button (2002) formalized the "hold-up" problem in contracts by distinguishing between *ex ante* transaction costs and *ex post* transaction costs.

The former assumes that contractual contingencies are costly to specify, whereas the latter assumes observable but non-verifiable information on the parties' valuation of future trade exchange or contractual obligations. Canlas *et al.,* (2006), explain that incompleteness of contracts results from a combination of investment specificity and the cognitive and informational boundaries of the judicial system, which decide on the enforceability of contracts. Moreover, they postulated that long-term contracts reflect the incapacity of parties to prevent *ex post* renegotiation. Canning, David and Pedroni (2004) noted four possible reasons that explain the presence of incomplete contracts: unforeseen contingencies, (existence of writing costs, the non-verifiability of valuations and states of nature, which create enforcement problems and the lack of commitment not to renegotiate.

Transaction costs may be high especially if there is lack of financial, economic and legal expertise to prepare optimal or near-optimal contracts. It is also possible that the prevailing legal system does not allow parties to prevent renegotiation (Llanto, 2007). In this regard, the contracting parties must ensure that renegotiation does not happen upon the instance of a trivial event or state of the world. It is always the rule

of stable long-term partnerships to avoid having to enter into a renegotiation because of trivial reasons or political whim or caprice (Canning, David & Pedroni, 2008).

Che and Hausch (1999), Harts and Moore (1988), based on game theory, had proposed the renegotiation models to invalidate the optional contracts. Edlin and Hermalin (2002) still argued if the threat-point effect is exceeding the holdup effect, then the contract could find its first best outcome according to the design of purchasing options. Lyon and Rasmusen (2004) believed that part of the holdup problem could be handled by using a purchasing option. Saavedra (1998) indicated the overinvestment or under investment situations would occur if the contract body were the government. Therefore, it is very important to regulate the contract opportunistic behavior in the developing countries by establishing a better legal system. Due to the long contract periods of these BOT projects, various unforeseen uncertainties have been occurring which had not been anticipated during the initial signing of contracts, and hence, renegotiation talks have on numerous occasions been necessary for these BOT contracts, like many international contracts, to protect the financial interests of all parties concerned, (Chen and Chen, 2005).

The financing of the investment requirement, against developing limited resources, by means of public resources becomes difficult. This circumstance gives rise to a search for new resources and finance methods; efforts are increasing to ensure the contribution of private enterprises to finance and risk. Whereas the B.O.T. model is a model developed related to these searches. By the B.O.T. model it is aimed at increasing the contribution share of the private sector in the infrastructure investments, to relieve the burden of public finance and to increase efficiency in the

presentation of service. However, research carried out on construction period, concession period and contract period as influencing financing has been based on secondary literature thus this study aims to collect primary and secondary data in establishing the influence of investment policy on financing BOT projects.

2.4.3 Financial factors and financing BOT projects

The financing package should be carefully tailored to the characteristics of the project. Under BOT financing model, financial considerations rather than the technical elements are likely to be the final determinants in awarding the BOT concession. An attractive financial package must be based on the principles of low capital cost, low operation and maintenance cost, credibility, minimal financial risks to the government and minimal reliance on debt-servicing capability of project cash flows, a BOT investor's capability to arrange an innovative, flexible and attractive financial package seems to be the crucial element behind its success in many BOT projects.

The event Deal Cuts Risk of Channel Tunnel Overrun was a public dispute that came to an agreement on January 12th of 1990. This event produced the highest positive cumulative abnormal return. The agreement contained three main components: (1) increase in total construction cost from £5 billion to £7.2 billion; (2) TML to bear 30% of all cost overruns, rather than 6% as originally agreed; and (3) a stronger incentive upon TML to complete the project on time through bonuses and more severe penalties. Even though the increase in total construction cost is a negative factor, the better alignment of incentives by TML clearly outweighed this negative factor. Some of the increase in construction cost must have been anticipated, but the

sign of a greater certainty of construction completion produced an overwhelmingly positive impact on the returns. This event shows the importance of having a construction contract that focuses on the alignment of interest rather than just a low cost. This result also shows that the concept of transferring construction risk to contractors through a set of legal contracts may not be so straightforward in infrastructure projects with highly specific assets. In particular, deals that focus on the management and alignment of interests in a dynamic way, especially during the initial stages of construction, could result in superior results (Bitsch, *et al.,* 2010).

A Study by Hui (2009) on construction cost of rail transport Projects in china found that it is a significant subject for the extensive engineering managers to have effective engineering cost management skills in rail project management and to reasonably determine and control the cost on the condition of ensuring quality and time limit. Findings put forward that rail construction cost should reflect cost control of the entire construction process at the earlier stage of construction, and then introduces some procedures and methods of applying value project cost control at all stages of rail construction projects. However, in different opinion Elazouni and Metwally (2007) studied the factors influencing infrastructure construction time and cost overruns for rail transport projects in Indonesia and found out that the major factors influencing cost overrun were material cost increase due to inflation, inaccurate material estimating and the degree of project complexity.

Economic and commercial factors, the size and the growth prospects of the domestic market, the status of communications and transportation infrastructure and the financial stability of the market constitute important elements of infrastructure financing decision-making (Moosa, 2002). Investments in infrastructure allow goods

and services to be transported more quickly and at lower costs, resulting in both lower prices for consumers and increased profitability for firms as demonstrated by De Haan (2007). A study by Yang and Meng (2000) identified five reasons for project cost overrun. These reasons were incomplete drawings, poor pre-planning process, escalating cost of materials, lack of timely and poor project decision and excessive change orders factors that determine cost of the construction project as time, poor project management, design changes, unexpected ground condition, inflation, shortages of materials, change in exchange rate, inappropriate contractors, funding problems and *force majeure*. This statement is supported by Acosta and Loza (2004).

Angelo and Reina, (2002) assert that cost overrun is a major problem in both developed and developing countries. Several studies of major projects show that cost overruns are common factors that delays project completion. What may cause cost overrun in railway construction projects are varied some are not only hard to predict but also difficult to manage as shown by (Morris & Hough, 1987). Study by Mohamed *et al.,* (2007) on financial factors affecting rail transport in Turkey. They use the case study design and applied interview schedule to collect data. The finding of the study showed that cost overruns could be inflationary pressures, increases in material prices and workers wages, difficulties in obtaining project infrastructure materials, construction delays, deficiencies in cost estimates prepared by public agencies and unexpected sub-soil conditions as the most important sources for cost overruns. It is appropriate to draw in a constructivist manner on researcher own understandings on measures of cost overrun. This study will investigate how the construction, operation and maintenance cost has influence BOT financing of projects.

Acosta and Loza (2004) in their study of rail construction in USA found that cost overrun is attributed to problems in finance and payment arrangements, poor contract management, material shortages, and changes in site conditions, design changes, mistakes and discrepancies in contract documents. However, studies conducted by Brinckerhoff (2001) on the cause of cost overrun in Portland, Oregon and San Francisco, California the study indicate that the influence on cost overrun occurs during constructions, price fluctuations, inaccurate estimating, delays, additional work, shortening of contract periods, and fraudulent practices and kickbacks. In both cases cost overrun and the implementation of BOT in USA, dynamics were ambiguous to one or more of the variable involved in the PPP. This leaves the opportunity for one variable to take advantage of another variable and press its weight in order to fulfil their interest, thus creating instances of disparity on measurement (Eredem, 2003). This study combine both the two variable, both commercial and financial factor in order to test the hypotheses, with an intension of isolating the variable that influence cost overrun mostly.

Shapiro (2010) attributes cost overruns to several factors that are either not controllable or that to a varying degree are unmanageable. They include the accuracy of original cost estimate, degree of government regulation and control, construction completion delays, number of design changes, and labour related matters such as their availability, skills, and increases in fringe benefits. DeLong and summers (2012) reflected on the findings of the project in relation to returns on investment therefore leaving the element of commercial viability unexplored. Subprasom and Chen (2007) in their study on uncertainty on investment in china established a negative relationship between aggregate investment and uncertainty for a cross-section of countries and

industries. DeLong and summers (2012) assert that financial and commercial factors may be studied together in order to highlight the viability of the infrastructure. According to Yang and Meng (2002), transportation systems with higher levels of transit ridership have lower operating costs, higher cost recovery rates and contribute to a municipality's lower transportation infrastructure costs, as compared to automobile dependent communities.

Canning and Pedroni (2008) argue that many transit-operating costs are generally fixed. Stewart (2009) posited that in for 10 years, Hamilton's population grew and congestion along major railway line and that it will continue to develop. This study will establishes the extent to which investment policy influence the financing of BOT. Shergold (2006) in the study of policy analysis in Russia points out that methodology for examining policy has been drawn on two research strategies. On the one hand, it draws on an analysis of the range of reports written about the infrastructure and about policy in the rail sector. In defining policy capacity, it is also necessary to specify the policies that guide financing and the ones that guide commercial viability (Waller, 1997). None of the study has applied primary data and has relied on secondary will collect primary data in findings out whether the studies would yield similar results.

According to Vervoort *et al.,* (2013) Construction projects often take several years, which means they are, to some extent, influenced by inflation. Especially projects that include a maintenance period are subject to inflation. He argued that a contractor has to estimate the cost of the construction and outfitting of the project for its client. This estimation should then include the price rise of the project three years after the client and the contractor have agreed on a price. The contractor has to

estimate the nominal price at the time the project is bought. Typically, cost estimates are formed in nominal prices at the start of a project, and escalated with inflation estimation.

The rationale is that the bundling of the facility's construction and operation into a single contract allows the internalization of any positive externalities that may exist between the construction and operational phases, thereby lowering the life-cycle maintenance cost of the facility. Further, it is in the concessionaire's best interest to minimize operations and maintenance (O&M) costs and problems (Papajohn *et al.,* 2010, Frontier economic (2006*)*state that ,1) a PPP concessionaire is paid a fixed amount of money to build and maintain the facility at contractually specified service levels for long periods of time, and 2) the O&M phase is the longest on a PPP concession and the most important, as is when the service delivery and payment conditions are created.

In the UK, PFI projects are designed to fund long-term infrastructure and public services; they are the equivalent (and some argue the precursors) of what other PPPP. Frontier economic paper titled *"Operation and Maintenance (O&M) Management in PFI Road Projects in the UK"* cited a report from the UK's Private Finance Panel (PFP, 2005) arguing that a PFI is designed not to borrow money from the private sector but to transfer risk to the private sector. Coupled with efficiencies in management, a PFI's resulting benefits would outweigh the higher costs of private funding, resulting in greater value to taxpayers. This is the same argument that resonates with PPP supporters in other countries.

Hart (2003) refers as a conventional provision", the way the government can contract a private sector to build and operate an asset separately. He argues that the

choice depends on the relative importance of different types of error. Framed the issues in terms of transactions costs, with the choice between bundled or unbundled structures whether it is easier to write contracts on service provision than on the quality of the building. According to his research unbundling of construction and operations offers no more incentive to make larger upfront outlays in the construction phase in order to achieve lower life-cycle maintenance costs. The absence of bundling declines productivity efficiency.

2.4.4 Environmental factors and financing BOT projects

Environmental regulation has become an important part of policy being implemented in order to internalize externalities, reduce damage, and increase quality of life. These desirable effects are not however straightforward to achieve. Whether policy would yield the effects or not would depend on behavioural responses, technology possibilities and the strictness of the instrument with respect to involved abatement costs (Scancy *et al.,* 2006). A study by Máca *et al.,* (2009) using the structural macro econometric E3ME model compare two alternative green tax based policy frameworks in the Czech Republic. While the first imposes a tax on emissions of classical pollutants (particulates, sulphur dioxide, nitrous oxides, and volatile organic compounds), the second consists of carbon taxation intentionally set at the level equalizing environmental effect measured by externalities that are avoided as result of both reductions in emissions subject to taxation and auxiliary effects.

According to Estach *et al.,* (2010) a strong and reasonably detailed legal framework can set the parameters for handling PPPs and also provide assurance to the private sector that contracts will be honoured. The more transparent and credible the

enabling environment, the less risk premium charged by private investors in PPPs. Li, Akintoye, and Hardcastle (2001), who distribute risks into three levels: macro, meso and micro. Macro level covers risks outside the project – environmental, political, legal risks that are concerned with national or industry level. Meso level risks emerge within the project's implementation phase – design, construction, operation. Finally, the micro level risks concern risks that appear between the partners involved, they rest on the idea that both of the parties have different incentives and objectives, and therefore, risks due to power struggle, differences in working methods and environment between the partners may emerge. Furthermore, Grimsey and Lewis (2004) argue for more detailed risk categorisation – they divide risks into nine categories that are suitable for the infrastructure approach: technical, construction, operating, revenue, financial, force majeure, regulatory/political, environmental and project default risks. This distribution is similar to the one proposed by Gray (2004), IMF (2004) and the European Commission (2009).

The private sector investors and lenders will be interested to develop public infrastructure projects when the environment where these projects operate is favourable. The private sector would like a favourable, political, legal, economical and commercial environment. After establishing a business unit and a legal framework within which the business unit would work, it must know how the risk is allocated between parties and their consequences. The business units should have the knowledge about the market within which it works. The government is in a better position than any party in creating such environments, which largely eliminate fears of the private sector concerning various risks, especially political risks such as expropriation and nationalization. Country-specific and/or project-specific

governmental guarantees and support may also be necessary to manage certain risks that can be better handled by the government, such as change in law, foreign currency convertibility, corruption, delays in approval of various permits, and certain force majeure risks (Fitzgerald, 1998; Zhang and Kumaraswamy, 2001).

Harris (2004) explained the need for high-level political support, addressing staff concern of losing jobs, need for the press to promote PPPs, prioritization of projects, and need to choose project sectors for which it is possible to develop a service based on output specification. The institutional framework needed to support PPPs within a jurisdiction requires development of guidance not only to central government departments but also to local governments and authorities. Successful implementation of PPPs requires the availability of diverse skills and expertise in procurement, legal, and financial management. Appropriate public relation strategies and activities are needed to win public understanding and support (Levy, 1996).

Sensitive movements for environmental concerns, makes the investors hesitant from investments in large infrastructure projects. Government support in such projects plays a crucial role to attract the investors.

Bruha and Scasný (2005) affirmed that environmental tax reform are mostly based on higher energy taxation, including the principle of revenue neutrality and is base on carbon taxation, and harmful airborne pollutants. Environmental regulation is not, however, free of economic impacts. Intervention might harm the economy and reduce overall welfare; or, on the contrary, a double dividend might be reaped, technological progress enhanced or employment boosted. To evaluate the overall effect, economic models have to be developed and gradually utilized (Máca *et al.,*

2009). Benes *et al.,.* (2003) posited that impact of instruments on the environment and the economy should play an essential role in making a decision about the particular mix of tools. Zylicz (2002) found emission charge rates were one order lower than the Pigovian rate in Poland. Maca *et al.,* (2009) draw similar conclusion by comparing actual emission charge rates and the values of respective external costs in several Europeans countries.

The study done by Mogila *et al.,*(2010) on the use of Biofuel on the Railway transport in USA found that there is a growth in emissions of NO_2, which can be compensated by a decrease in fuel injection advance angle. The study used secondary data to arrive to the findings. Greene & Schaefer (2003) points out that it is possible for bio fuels to be used instead biodiesel on railway transport. In addition, there is a positive experience in using biodiesel on rail transport. European Commission (2009) reveals that in U.S. (Texas) a mixture containing 80% of diesel fuel and 20% of biodiesel in diesel engines have been tested and was noted that there was a decrease of harmful emissions and the reduction of power losses of the locomotive. This also corresponds to the Mogila *et al.,* (2010) findings.

However, according to Katsioloudis and Mildred (2012) the additive proved to be economically insufficient and that by reducing the dependence on non-renewable diesel fuel and improving the environmental give a promising ways. It is rational to use biodiesel fuel as an additive to diesel fuel and in future as an independent fuel (Greene & Schaefer, 2003) According to U.S. Department of Transportation (2010) Results from environmental research and pursuant governmental regulations are changing the way companies do business and how transportation systems address the

future. According to the report for the Pew Centre on Global Climate Change mentioned, trucking accounts for 72 percent of "transportation energy and use and carbon emissions affects on the environment (Greene & Schaefer, 2003).

A study by Topalovic *et al.,* (2012) explores the health, environmental, social and economic impacts of light rail transit, and a component of the City of Hamilton's rapid transit initiative in America. It performs a comparative analysis with other major North American cities that have successfully implemented this form of mass transit. The analysis concentrates on three main areas: urban development and land values, health and environmental impact and socioeconomic factors. The results of the research on light rail transit (LRT) and its possible benefits indicate overwhelming support for the economic, health, environmental and social benefits of LRT, especially when compared to other forms of transit, including rapid bus and local transit schemes. Greene and Schaefer (2003) argue that the result should be considered a viable and desirable transit option; a catalyst for transit oriented, high density, mixed use development; an economically sound investment opportunity, providing a return on investment to property owners, businesses and the municipality; and a catalyst for social change, improving the health, environment and connectivity of the community.

Cervero and Sullivan (2011) points out that rail transport has been used as a strategy for implementing a rapid transit system in an urban environment and can have an effect on urban growth, land use, intensification and revitalization without a push factor. Litman (2010) states that the impacts of rail transport on development are not accidental and have significant impacts, and stimulated economic benefits only

occur when a system is planned with policies and complementary land-use strategies in place. Litman (2010) consent that development impacts of Railway transport systems are restricted to regions that are rapidly growing and have a healthy underlying demand for Rail transport as opposed to policies.

Crampton (2003) asserts that cities, which have successfully implemented LRT systems, have reported an increase in shopping commerce generated adjacent to the transit line, development of new residential and commercial areas and increased employment nodes, as was the case with LRT development in San Diego.

Although urban development has been reported around where rail transport infrastructure has been effective, Handy (2005) reports from the Transit Cooperative Research Program (TCRP) concluded that rail transit might not actually create new growth but simply redistribute growth that would have otherwise taken place elsewhere without the transit investment.

A study by Olmstead (2003) on how Dam construction project influenced people's lives in Bujagali. The study used the case study design and observation method in collecting data. The findings were that the construction of the dam had violated the religious belief while also threatening to displace people and destroy the surrounding environment. These led interest groups to protested against the construction of this dam, thus delaying the start of this project. The private infrastructure provider later pulled out of the project (International Rivers Network, 2004). Botman *et al.,* (2006) points out that water supply and sanitation sector has traditionally been a fertile ground for disputes relating to social inequality. Byrnes,

and Patricia, (1991) noted that most private providers of water and sanitation services in developing countries are foreign firms funded through BOT.

The European Environment Agency (2001) ascribes energy to be the basic driving force behind both the climate change and a number of other air pollution problems. The energy consumption unfortunately still depends on a growing demand in the transport sector (European Environment Agency, 2001). These desirable effects are not however straightforward to achieve, (Shapiro, 2010). Whether policy would yield the effects or not would depend on behavioural responses, technology possibilities and the strictness of the instrument with respect to involved abatement costs (Pollitt, 2008).This study fill these gaps.

Case studies suggest that BOTs are complex, demanding and time-consuming but that under the right conditions, and in the right sectors, they can offer significant benefits to government, the private sector and consumers. They have been generally more successful in sectors such as ports, telecommunications, and transport and eco-tourism projects than power and water. But with the correct regulatory framework and strong political commitment, they do offer value for money to governments and good opportunities for investors.

Farlam (2005) reveals that those partnerships that have been most successful in Africa have been characterised by thorough planning, good communication, strong commitment from parties and effective monitoring, regulation and enforcement by government. The issue of pricing is crucial both to avoid political fall-out and to ensure the viability of the contract for business. Leaders need to talk openly with their citizens about their inability to continue to offer free, undervalued or heavily

subsidised services, and their plans for holding the private sector accountable for providing these services. BOTs — like full privatisation and other forms of government tendering — are vulnerable to graft and governments need to effectively tackle corruption before they can hope to get such partnerships right.

Farlam (2005) further noted that implementing mechanisms to guarantee transparency at all stages in the tendering process. These mechanisms must include sett procurement specifications, open public hearings for major government contracts, and the final selection of contractors; and Involving independent agencies such as to oversee the bidding process and commit and private bidders to an integrity pact, Pre-empt public complaint and suspicions by; preparing the ground structural reforms and raising tariffs to approach cost recovery levels (where appropriate); communicating decisions around privatization and BOTs to the public to build consensus and transparency, providing policy clarity in the areas of free basic services in concession areas; considering the extent to which a project or particular bidder will contribute to the local socioeconomic environment, assessing the political commitment government institutions.

According to IMF (2004) good governance matters in BOTs if governments are to climb the maturity curve. This process requires putting into place the enabling institutions, procedures and processes surrounding BOTs in order to fully benefit from BOTs. This means also helping governments to play a critical role in the process and involving citizens as well as other stakeholders. Many governments, regional, international organizations and NGOs now recognize the importance of governance for economic development. Good governance involves some key principles, good

governance is open to much interpretation but overall six core principles have become widely accepted; the degree of involvement of the public; the degree to which the formation and stewardship of the rules is undertaken without harming; or causing grievance to people; the degree of clarity and openness with which decisions are made; the extent to which political actors are responsible to society for what they say and do; the degree to which rules apply equally to everyone in society; and the extent to which limited human and financial resources are applied without waste, delay or corruption or without prejudicing future generations (Guidebook on Promoting Good Governance in Public-Private Partnerships, 2008).

2.4.5 Political and legal factors and financing BOT projects

The importance of politics in the development of a BOT project has been identified in many cases. Kumaraswamy and Zhang (2001) identified unfavourable policies and political acts that caused failure to award new BOT projects or resulted in early terminations of projects that were in progress (cases in Turkey, Thailand and Lao PDR). Examples of such acts are the lack of government assistance in resolving conflicts of competitive projects (e.g. the Bangkok elevated transport system in Thailand) and the unwillingness of the government to provide guarantees (e.g. energy and transportation projects in Turkey). Yeo and Tiong (2000) also reviewed some cases of BOT projects that failed due to political reasons, such as the lack of political stability and the change in expectations of the host governments (Kafco Fertilizer Projects, Bangladesh), as well as the lack of political will to share risks (Very Fast Train Project, Australia), and questionable contract evaluation (Skytrain Project, Thailand).

The conclusion drawn from these cases is that the political environment in the host country of a BOT project is a critical factor, involving uncertainties and high risks. Wang *et al.,* (2000) define political risk as "the government actions that may endanger a project". According to the same authors, the primary political risks refer to change in law, delays in approvals, expropriation and reliability, and creditworthiness of the entities involved in the BOT project. Bilson *et al.,* (2002) present various definitions of political risk and derive a more expansive definition than the abovementioned. In particular, they define political risk as the risk that arises from the potential actions of governments and other influential domestic forces which threaten returns on investment. This definition is very close to the suggestion of Button and Keneth (2002) on the same topic. Finally, in the Legislative Guide on Privately Infrastructure Projects published by the United Nations Commission on International Trade Law (UNCITRAL, 2001), political risks are identified as the risks that occur by the acts of the contracting authority or another governmental agency or the host country's legislature. In the above guide, these political risks are divided into three broad categories as presented in Table 1. It could be inferred from the above that political risk could not be ignored during the development of a BOT project. However, it is not clear whether the meaning of political risk can be treated separately from other risks such as financial and legal risks. For example, in Bilson *et al.,* (2002), the term "political risks" comprises blocked funds, repatriation constraints in the form of exchange controls, inconvertibility of currency, and discriminatory taxation.

The same authors adopt indices to present varying degrees of political risks, including both a financial risk index and an economic risk index. In Wang *et al.,*

(2000), changes in the legal system, which is a government action related to the legislation framework, is considered a main political risk. Based on the above discussion, it is observed that both Bilson *et al.,* (2002) and Wang *et al.,* (2000) consider political risks as standalone entities. Furthermore, it can be seen that political risks intersect with both financial and legal risks, with potentially stronger propensity towards the legal risks. In UNCITRAL (2001), it is stated, "the law typically embodies a political commitment". Any administrative act by the government or by any other public authority is a political act implemented by the use of the country's legal and regulatory system. The above considerations lead to the conclusion that it is more appropriate to consider political risks as the subset of the legal risks, which is related to political actions or omissions by the government or any other public authority in the administrative structure, (Xenidis & Angelides, 2005).

Different political and legal framework in the environment can greatly influence different opportunities and threats faced by industry and the companies operating within (Aisen & Veiga, 2006). A study by Agrawal *et al.,* (2009) on the Effect of Political Instability on Economic Growth and Investment in the Middle East and Central Asia with the purpose of the study being to empirically determine the effects of political instability on economic growth. Using the system-GMM estimator for linear dynamic panel data models on a sample covering up to 169 countries, and 5-year periods from 1960 to 2004, the findings show that higher degrees of political instability are associated with lower growth rates of GDP per capita and hence deter private investment. The sources of economic data were the Penn World Table Version6.2– PWT (Cervero & Duncan, 2002). The World Bank's World Development Indicators (WDI) and Global Development Network Growth Database

67

(GDN), and the International Monetary Fund's International Financial Statistics (IFS). Political and institutional data were obtained from the Cross National Time Series Data Archive (Databanks International, 2007), the Polity IV Database (Chesterton, 2002).

The State Failure Task Force database (SFTF), and De Haan (2007). The hypothesis that political instability and other political and institutional variables affect economic growth was tested by estimating dynamic panel data models for GDP per capita growth (taken from the PWT) for consecutive, non-over lapping, five-year periods, from 1960 to 2004. Bougatef and Chichti (2010) used data on 113 countries from 1950 to 1982 and confirmed that GDP growth was significantly lower in countries with a high propensity of government collapse.

Bodnar, Dumas and Marston (2002) points out that higher degree of political instability led to lower economic growth in Taiwan. Barro and Lee (1996) attest that socio-political instability generated an uncertain politico-economic environment, raising risks and reducing investment. In the current study, literature will document the negative effects of political instability on a wide range of macroeconomic variables including, among others, GDP growth, private investment and inflation. The earlier studies relied on secondary data and therefore based their findings on the other findings. In the current study data will be primarily source and the study will investigate a period seven years in order to estimate the influence using longevity.

Mohammed (2009) study on politics and governances in Egypt found that distraction of the rail transport comes because of bad politics he uses case study to analyses his findings. Barro and Lee (1996) assert that some fundamental questions

behind the negative relationship between political and legal in relation to BOT financing of long-term infrastructure projects were not tackle. Bu and Milner (2008) affirmed that Politics affected Foreign Direct Investment into Developing Countries and that investment through international trade agreements varies greatly across developing countries and over time due to political reasons. Henisz (2000) points out that political factor affect the flows of funding and that they are well understood. He focused on the relationship between trade and investment. He argues that international trade agreements GATT/WTO and preferential trade agreements (PTAs) provide mechanisms for making commitments to foreign investors about the treatment of their assets, thus reassuring investors and increasing investment. Ram & Zhang (2002), support the views.

However Shapiro (2010) analyzes 122 developing countries from 1970 to 2000 and supported Henisz argument that politics is a factor when it comes to long term investment. Supporting the findings, other scholars have found no significant effects for regime type. Egert, Kozlu and Sutherland (2009) in their study done in Italy on regime change agreed with the early studies, that politics can change long term investment if not well backed by legal aspect. Political and legal institutions will be the focus of the current study studies. In order to elaborate on how legal framework may contribute to lack of BOT financing as the regime change may lead to change of contract. Hence, a hypothesis was tested to establish level of how political and legal factors affect the BOT financing.

A study by Harris and Shukla (2003) on the impact of politics and direct investment in Canada, results were in contrast to the early literature on direct

69

investment, which had suggested that successful financing of rail transport were due to autocracies. Harris and Shukla noted that autocracies is a personal trait and cannot be attributed to a system, which must be running in the absence of the person. Davis and Shapiro (2005) point out that autocrats' ability to suppress labour demands and by the absence of election-induced policy uncertainty were the determinant. Brunetti, Kisunko and Weder (2009) ascertained that development was as a result of general leadership. However Harris and Shukla (2003) acknowledges that as much as politics affect long term financing, legal should be part of the provision to secure investment. Schneider and Frey (2010) argue that Political instability and violence should make a country less attractive to long term investments. Eder (2009) affirmed that economic and political contexts are rendered less predictable.

Frontier Economics (2012) used secondary data in his study and his findings were that contract takes many years to be completed due to regime change which may lead to change of contract or cancellation. Berechman (2005) points out that possible explanation for small and variable impact of urban rail investment is "ubiquitous" accessibility found in urban areas with little impact on overall accessibility and additional infrastructure was where network is already well developed. However, Olaseni (2004) concluded that accessibility increasingly shapes metropolitan location decisions and not infrastructure development. Wegner, Prett and Smith (1995) state that under conditions of ubiquitous accessibility, monumental transport improvements have little effect on location. In general earlier studies have agreed that accessibility has important roles to play in the determination of property values but the studies failed to recognize the part played by rail network that primarily delivers the accessibility. Few of the studies established the relationship that exists between

70

property value and pattern of road network. The study explored the pattern and the impact of the railway. Those studies in addition did not focus on political and legal values in relation to accessibility and instead centred mainly on the legal aspect of transportation and transportation schemes Therefore neglecting the fact that, it is not only movements of people by rail, sea, inland waterways, air and roads that matter but also how patterns and modes of movements affect demand for activity centres and consequently values of properties including change of culture.

2.5 Conceptual Framework

This study was guided by the following conceptual framework and was based on a number of interrelated concepts that form conceptual framework. Provision of rail transport is affected by financing methods and many other factors.
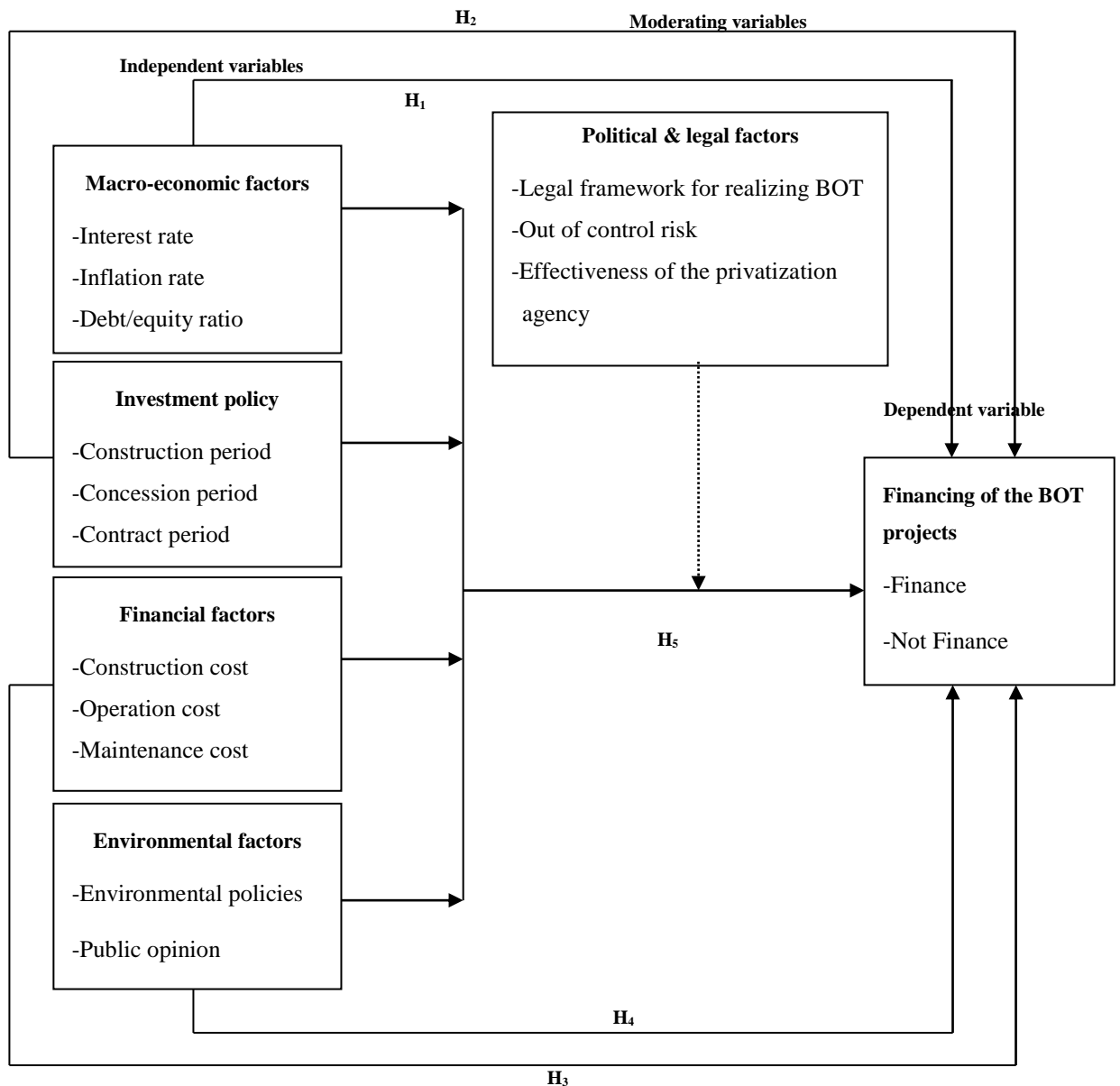
Figure 2.1: Conceptual Framework for factors perceived to be influencing financing of BOT projects

Figure 2 depicts a conceptual framework of factors perceived to be affecting BOT projects in terms of number of people, cargo transported, number of stations constructed, length of the railway line completed, and availability of the standard gauge for effective transportation system (dependent variable).

BOT financing method is slowly gaining popularity in Kenya. The financing method is likely to be affect by five major (factors) independent variables. These includes: Macroeconomics; such as interest rate, discount rate, inflation rate, debt/equity ratio, Investment policy: construction period, concession period, contract period, political and legal; political stability government experience in BOT legal framework for realizing BOT out of control risk highly effective privatization agency. Financial and commercial; construction cost, operation cost, maintenance cost and environmental policies, public acceptance in the idea. These factors, either in isolation or in combination will cause or affect provision of rail transport infrastructure.

2.6 Summary of the Literature Review

The literature review reveals various gaps, which are listed in Table 2.1.

Table 2.1 Knowledge gap

Objective	Variable	Author and year	Title of the study	Main findings	Knowledge gap
Determine how macro-economic factors influence the financing of BOT projects in Kenya.	Macroeconomic factor	Lakshmanan L. (2008)	Public-Private Partnership in Indian Infrastructure Development: Issues and Options	Stable macroeconomic framework, sound regulatory structure, investor friendly policies, sustainable project revenues, transparency and consistency of policies, effective regulation and liberalisation of labour laws, and good corporate governance are the basic requirements, which define the success of the BOT model. Investing in particular types of infrastructure does not offer quantifications of the macroeconomic effects of investment on project success.	The study lamped together many variables without proper indicators to each variable's influence on financing BOT projects. This study has analyzed each factor separately to show their influence on BOT financing. The study was based on secondary information and therefore analysis reflects the finding of other studies. This study was not based on primary empirical data, rather on secondary information sourced from other studies. The validity of the findings of the previous studies could not be

					tested because of use of secondary data. In this study, data was collected from the primary sources therefore validity was tested
Establish the extent to which investment policy influences the financing of BOT projects in Kenya.	Investment policies	Canning and Pedroni (2004)	Long run consequences of infrastructure provision on per capita income	A study of Long run consequences of infrastructure provision on per capita income in a panel of countries over the period 1950-1992. Their results provide clear evidence that in the vast majority of cases infrastructure does induce long run growth effects although there is a great deal of variation in the results across individual countries.	These studies reflected on the findings of the project in relation to returns on investment therefore leaving the element of commercial viability unexplored. The study has addressed the aforementioned gap.
		Llanto (2008)	Empirical paper on whether or not infrastructure acts as a binding constraint to growth	The lack of adequate transportation, water and energy Facilities, for instance, can adversely affect the development of existing industries and may likewise preclude new entrants from coming in. An efficient	

				transportation and communication infrastructure provides overall mobility for goods and people alike, contributes to a reduction of input and transactions costs an d enhances the efficiency of markets	
				Identified reasons for project cost overrun. The causes of cost overrun in railway construction projects are varied some are not only hard to predict but also difficult to manage. That cost overrun is a major challenge in both developed and developing countries.	
Determine how financial and commercial factors influence financing of BOT projects in Kenya.	Financial factors	Pindyck and Solimano (1993)	Economic Instability and Aggregate Investment	-The study found a negative relationship between aggregate investment and uncertainty from a cross-section of countries and industries. The findings suggest that both financial and commercial factors may be studied together in order to highlight the financial and	-The study did not bring out the influence of financial and commercial factors on the financing investment projects. Consequently, this study intends to determine the influence of financial and commercial factors on BOT financing of a railway project in Kenya. As funding

				commercial viability of the rail transport infrastructure. Construction contracts that involve the selection of concession period, road capacity and toll level with demand uncertainty. Two types of flexible contracts, partially and fully flexibly contracts, between the public and private sectors are investigated by assuming that the uncertain demand curve is ex post observed, and thus the contract variables can be ex post adjusted according to certain ex ante agreed rules	must be accompanied with spending.
Assess how environmental factors influence financing of BOT projects in Kenya	Environmental factors	Gupta,(2005) Gollakota(2011), Aisen and Veiga (2006) Ram, & Zhang, (2002).		-The studies indicated that different political and legal factors in the environment can greatly affect the different opportunities and threats to be faced by the industry and the companies operating within. -Found that increasing rail	-The studies did not bring out the influence of political instability and bad laws on the success of private sector investments, particularly through BOTs. -The studies neglected the fact that it is not only movements of people by rail, sea, inland

				transport investment through international trade agreements varies greatly across countries and over time.	waterways, air and roads that matter but also how patterns and modes of movements affect demand for activity centre's and consequently values of properties including change of culture. -This study established the influence of political instability on success of BOT funded projects. -This study combined both political and legal aspects as components of BOT financing. -Besides, none of the studies tested the hypothesis to establish factors that could be significantly relevant. This study will test the hypothesis to establish whether political and legal factors would yield similar findings.
Establish how political and legal factors influence financing of BOT projects in Kenya.	Political and legal factors	Rajkumar et.al, (2013)	A Study on Critical Factors Influencing The Infrastructure Development Projects Under	The findings from this study is that the risk factors are Clustered into 50. Meanwhile the most frequent factors are Change in law, Delay in Project Approval and	-The studies did not determine whether tax incentives have a positive or negative influence on the successful financing of public utilities by the private sector. This study intends to establish the role

	James (2009)	Public Private Partnership	Permits, Land Acquisition & Operation Cost Overrun.	of tax incentives on the BOT financing of a rail transport project.
	Grubert and Mutti (2004)		-The studies noted that governments make extensive use of investment incentives in an effort to attract investments. -The studies further indicated that investments oriented toward domestic markets are less sensitive to changes in tax incentives, compared to export-oriented investments.	
	Blejer and Khan (1984) Elkington (1997) Hart (1986) Porter (1995)		-The studies indicated that transport is the second largest contributor to global carbon emissions. -Again, those projects frequently need to deal with environmental externalities and social justice.	-None of the studies brought out the influence of community perspectives about the environmental issues surrounding BOT projects. This study will hereby try to establish whether despite that why rail transport would not be effective.

Maibach *et al.,* (1997) Mogila, Vashliev, and Nozhenko (2010)		-The studies indicate that rail is the most efficient transport form when its operation alone -There is a growth in emissions of NO_2, which can be compensated by a decrease in fuel injection advance angle. In addition, there is a positive experience in using biodiesel on rail transport.	These studies however relied on secondary data while the current study sought to get information from primary source.
Giuseppe (2010)	Breaking Down Factors of Public-Private Partnership in Urban Rail	The Institutional & Legal Environment of Latin countries are characterized by the lack of transparency law, independent judicial system but with some progress in unifying PPP laws. The Socio-Economic Environment is distinguished by the volatility which can reach long periods of economic growth but also long periods of unexpected economic crisis. The Risk allocation is still a challenge that can affect the total duration of a project.	The methodology used was desk research, interviews and literature reviews. This study majored its findings from questionnaires and self administered interview schedules

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers research methodologies under the following sub-themes, research paradigm, research design of the study, target population, sample and sampling procedures, pilot study, description of the research instrument, validity of the instrument, reliability of the instrument, data collection methods and data analysis procedures, ethical considerations and operational definition of variables.

3.2 Research Paradigm

Pragmatism paradigm has been applied in this study. Pragmatism is a deconstructive paradigm that advocates the use of mixed methods in research, it sidesteps the contentious issues of truth and reality (Feilzer 2010), and instead focuses on 'what works' as the truth regarding the research questions under investigation. This study used a dichotomous questionnaire that consisted of open ended questions that captured qualitative data, structural and yes/no questions that yielded quantitative data. In that sense, pragmatism rejects a position between the two opposing viewpoints as applied in this study. In other words, it rejects the choice associated with the paradigm wars (Tashakkori and Teddlie 2003).This paradigm was applied by Morse's (1991) review of nursing studies or Meekers' (1994) study of marriage patterns in the Shona-speaking people of Zimbabwe and it yield good results. Mixed methods approaches has become more firmly embedded in mainstream research, pragmatists link the choice of approach directly to the purpose of and the nature of the research questions posed (Creswell 2003). In this study, the mixed methods research

design was applicable as it links the purpose of the study with its objectives under investigation.

Under the paradigm, the study was multi-purpose and a "what works" tactic allowed the researcher to address questions that did not sit comfortably within a wholly quantitative or qualitative approach to design and methodology. For these reasons pragmatist's paradigm was adopted.

3.2.1 Research Design

In light of the research paradigm, the study adopted the mixed methods approach. Mixed methods research is formally defined as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study and will included a descriptive survey, co-relational and *ex-post-facto* research designs. A survey research is a study that is set to determine and describe the way things are Gay and Airasan (2006). The study also qualifies as an *ex-post-facto* research; Kerlinger & Lee (2000) aptly defined ex-post facto as: "That research in which the independent variable or variables have already occurred and which the researcher starts with the observation of dependent variable or variables. He then studies the independent variables in retrospect for their possible relations to and effects on the dependent variables or variables.

Ex-post-facto design was appropriate owing to the subject under study that is financing Build Operate Transfer projects. It is difficult to control some independent variables under study because their manifestations had already occurred. Examples of such variables in the current study includes; macroeconomic, investment policy,

financial, as well as environmental factors. These variables cannot be manipulated. Co-relational design was appropriate because the study tested the validity of null hypotheses in order to establish the relationship between the independent variables and the dependent variable. It is important to note that different researchers suggest different systems or research classifications, according to Mbugua (2012), research classifications are not mutually exclusive and therefore a research may fall under more than one category. This view supports Orodho's (2004) arguments that there are no generally accepted schemes of classifying researches and therefore recommends correlation research in establishing statistical relationship between two or more variables.

3.3 Target Population

The study targeted the consortium partners who actively participate in the management of the concession as well as the employees of the rift valley railways. A total of 720 staff involved in the management of the consortium was targeted. These included, 200 operation heads, 450 technical staff, 50 senior managers, 16 rail concession monitoring staff, 2 government representatives from the Ministry of Transport and Infrastructure and 2 from the Ministry of Finance. They were viewed as decision makers on issues pertaining to financing Build Operate Transfer projects.

3.4 Sample Size and Sampling Procedure

In this study, a probability technique was applied in determination of the sample size. This section discusses the sample size and the sampling procedure adopted in the study.

3.4.1 Sample Size

Table 3.2 shows the number of targeted participants in each category. These have been designated as the population (N). In view of the fact that this assumption is similar to that underlying the Yamane's formula, the original equation from which the Yamane formula was derived from was chosen in preference to Cochran formula:

$$n = \frac{z^2 P(1-P) N}{z^2 P(1-P) + N(e)^2} \quad (1)$$

Where:

n = sample size

N = population size (720)

z = standard normal variable (z = 1.96 at 95% confidence level)

P = proportion or degree of variability = 50%

e = the level of precision = 5%.

The above formula yields a sample size (n) = 402.

3.4.2 Sampling Procedure

The population of the study constitutes the senior managers, the technical managers, the operation managers, the officials of the two ministries, because they were the key people involved in the concession. The study applied stratified random sampling method. Of which the members of the population was arranged into

mutually exclusive and collectively exhaustive groups (Kumar, 1999). The choosing

of the sample size was based on the Yamane (1967) formula.

Table 3.2: Distribution of the sample sizes

Category/Department	Total Population	Sample Size	Proportion
Operation Heads	200	132	32.84%
Technical Staff	450	207	51.49%
Senior Managers	50	44	10.94%
Kenya Rail Monitoring staff	16	15	3.73%
Ministry of transport and infrastructure	2	2	0.5%
Ministry of Finance	2	2	0.5%
Total	**720**	**402**	**100%**

The sample size of this study was 402 (100%), consisting of 132 (32.84%)

operation heads, 207 (51.49%) technical staff, 44 (10.94%) senior managers, 15

(3.73%) Kenya rail concession monitoring staff, 2 (0.5%) Ministry of Transport and 2

(0.5%) Ministry of Finance Staffs. These people are directly dealing with the rift

valley railway concession.

3.5 Research Instruments

This section gives a brief description of research instruments used in the study;

pilot testing process, validity of the instrument and reliability of the instrument.

The study used two sets of instruments in data collection to source the requisite information; these included a survey questionnaire and a key informant interview schedule. The survey questionnaire contained three sections; section (A) which contained three semi-structured items that collected demographic information of the respondents, section (B) contained twenty (20) items that measured the level of influence on BOT financing, section (C) contained five level measurement scale items that solicited information on macro-economic influence on financing BOT, whose focus was interest rates, inflation rates, share prices of partners, debt ratio, and risk management. Further interview schedule was used to obtain information related to factors influencing financing of BOT projects. The interview guide had both structured and semi-structured items. A total of twenty eight (28) items were included in the guide. Triangulation was done to ensure accuracy in the opinion of the rail monitoring staff and government officials.

3.5.1 Pilot Testing

To address the issue of questionnaire reliability in this study, pilot study was carried out by the use of the test and re-test method for reliability testing was used, based on Mugenda and Mugenda (2003) 10% rule, 21 operations heads, 31 technical staff, 11 senior manager, 8 rail monitoring staff in Kisumu and Nakuru and 1 official from ministry of transport and infrastructure development were asked to complete the questionnaire twice. The first batch of questionnaires were administered to the group of respondents, six weeks after completing the questionnaire, the questionnaires were collected and analysed, certain sections were rephrased to give clear understanding on clarity of the data required. After two weeks, the rephrased questionnaires were

submitted back to the same respondents for piloting. This group did not participate in the final study. 59 of the 72 respondents completed and submitted the second questionnaire. The scores from both the questionnaires were evaluated and tool assessed for consistency and reliability of answers. A comparison of the test score was expressed by Pearson correlation coefficient, r. the magnitude of the coefficient (r =0.85). This provided support regarding the tools stability. An r equal or greater than 0.7 is considered an acceptable value for tool to be viewed as reliable (Burns and Grove, 2007).

3.5.2 Validity of the Instrument

Validity is the most fundamental consideration in instrument development and refers to the degree that the instrument measures what it claim to measures (De Vaus, 2002).There are basic ways in which to assess the validity of an instrument, criterion, content and construct validity approach compares the new tool to an existing well – accepted instrument and measures the same concept (Nachmias & Nachmias, 1996). Since no other instrument could be found in the published literature, this approach could not be used to test the rigor of these instruments. Therefore the focus was on the content validity. Content validity refer to the ability of the instruments items to present the content of a given construct (Schneider *et al.,* 2003) When the researcher was developing the instrument , the concern was whether the instruments tools and items it contained were representative of general factors influencing financing BOT.

To tackle the issue of content validity the research approached Build Operate Transfer financing expert in the ministry of financing dealing with investment and the two supervisors to examine the questionnaires content (Jedwab & Moradi, 2011. The

researcher wanted to ensure the tools focus on factors influencing financing of build operate transfer concept. Comments on the items and their relevance were clarified and modified according to comments from the expert and the supervisors. Minor modifications to the layout and wording were made prior to its use in the study. Therefore the language and sentence structure of every question was examine carefully so that the participant would not be confused by the content of the questions

3.5.3 Reliability of the Instruments

As well as the issue of reliability, it was essential to consider the reliability of the pre and post-test questionnaires. Rambo (2008) identified other benefits of pre-testing that include among others, increase of respondent participation in the research and to identify questions with content, wording and sequence of problems with a view of improvement. The reliability addresses the ability of a measuring tool to provide the same results on repeated occasion (DeVaus, 2002; Schneider.*et al.,* 2003) the method of test-retest reliability addresses the question of consistent answered from the multiple occasions of use. Depending on the text, the suggested interval at which the test should be administered varied from two to six weeks (De Van; and Golan, and Weizman, 1998).

De Vaus suggested that trial of the instrument be undertaken on a smaller but similar sample to that being in the study. To address the issue of questionnaire reliability in this study, the test re-test method of reliability testing was used, based on Mugenda and Mugenda (2003) 10% rule, 21operations heads, 31 technical staff, 11 senior manager, 8 rail monitoring staff and 1 official from ministry of transport and infrastructure development were asked to complete the questionnaire twice. Six weeks

after completing the questionnaire, the same officials were asked to complete the same questionnaires again.

During the eight weeks, the officials were asked not to talk to anyone about the content. After the eight-week period, 59 of the 72 respondents completed and submitted the second questionnaire. The scores from both the questionnaires were evaluated and tool assessed for consistency and reliability of answers. A comparison of the test score was expressed by Pearson correlation coefficient, r. the magnitude of the coefficient ($r = 0.85$). This provided support regarding the tools stability. An r equal or greater than 0.7 is considered an acceptable value for tool to be viewed as reliable (Burns and Grove, 2007). Therefore the results indicate that the questionnaire was a reliable tool. The respondents did not participate in the final study, but their views formed part of the total response.

3.6 Data Collection Methods

On completion and approval of research proposal by the University of Nairobi, application for research permit from the National Council of Science and Technology was done. On obtaining the permit, a visit to Education office was made in line with issuance of the permit. Thereafter, the headquarters of the Rift Valley Railway Cooperation was visited in order to obtain permission from the C.E.O to administer questionnaires and conduct interviews to staff that were targeted by the study. The researcher sought informed consent from the staff who participated in the study, and this was by a consent form.

The study used self-administered questionnaires and semi-structured interview schedule. The research assistant visited the offices for administration of the

89

instruments. The respondents were requested to fill the questionnaires, after three days on completion of the questionnaires, the research assistants collected back the questionnaires. The exercise took three months to distribute and collect all the questionnaires. The researcher booked appointments with the government officials and Rail monitoring staff depending on the availability of time and the prevailing circumstances. The entire rail monitoring staff sampled, participated in the study. The booking and conducting of interviews lasted for a period of three months.

3.7 Data Analysis Techniques

The study used descriptive and inferential statistics given the nature of data collected. A statistical package (SPSS 16.0) was used to determine descriptive distribution of respondents' demographic factors, percentages and cross-tabulations, inferential analysis yielded cross-tabulations with Chi-square (χ^2) statistic for interpretation. The χ^2 statistic established the statistical relationship between two variables both of which were nominal and ordinal scales. Chi-square was computed using SPSS software whose outputs established whether the influence is attributed to different conditions (Obure, 2002). The analysis techniques used was dictated by the nature of data collected that was categorical and nominal. Qualitative data was sorted out in categories and coded in SPSS and further classified into themes.

Binary logistic regression model applied the maximum likelihood estimation method in transforming dependent variables into logit variables, that is, the natural log of the odds that a particular employee of the consortium perceived that the financing of the BOT project is influence or not influence given a set of independent and moderating variables. Through the maximum likelihood estimation *(MLE)* method,

90

binary logistic regression model derived the *log likelihood ratio*, designated by *-2 log likelihood* and also known as the predictive power of the regression model. According to Scott (1995), the *-2 log likelihood* reflects how well variance in dependent variables are accounted for by independent variables, when the influence of moderating variables is factored into the models.

Binary logistic regression model was particularly suitable for this study, because it accepts all types of independent variables irrespective of the scale of measurement. Besides, unlike linear regression, binary logistic regression makes no assumptions about the distributions of independent variables. Although its output has several parameters, this study was interested in the *β coefficients*, *odds ratios, Hosmer-Lemeshow goodness-of-fit statistic, Nagelkerke's R^2* and finally a Wald test.

Data collected was presented in tabular format as appropriate. Table 3.3 shows a summary of research questions and how the data collected was analyzed to answer each questions and research hypothesis.

3.8 Ethical Considerations

An important aspect of research is the respect and consideration that researchers show to the participants. The researcher applied for a permit from the Institute of Science and Technology to carry out the research. After the permission was granted, the researcher also sought clearance to collect data from the Management of the Rift Valley Consortium about the research and asked for permission to administer questionnaires and conduct interview among its employees. Participants were briefed on the research process and its purpose. They were notified that participation was purely on voluntary terms. The respondents were assured of

their right to withdraw from the interviews before end of the session if they responded offended. Again, their withdrawal shall have no negative consequences. In addition, participants were assured that information on their personal life and opinions were to be handled and processed in confidentiality. Research Assistant was requested not to capture participants' names or other personal identifiers to assure confidentiality. Collected data was Code so that identifying info was eliminated, in the process the names were substituted with other names to hind the identity of the respondent releasing or reporting individual data was not done in this study. The researcher limited the access that could reveal individual identity in the study. The collected data was reported in group form to avoid individualism. The researcher used the computerized methods for encrypting data. Data was collected only from participants who met the requirement of the research.

3.9 Operational Definition of variables

Table 3.3: Operationalization of Variables

Objectives	Variables	Indicators	Measurement Scales	Research approach	Tools of analysis	Type of data analysis
	Independent variables					
Determine the macro-economic factors influencing financing of BOT projects in Kenya	Macroeconomics	Interest rate	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald test	Quantitative/Qualitative
		Inflation rate	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression	Quantitative/Qualitative
		Debt/equity ratio	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative

Establish the extent to which investment policy influences the financing of BOT projects in Kenya	Investment policy	Construction period	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
		Concession period	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
		Contract period	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
Determine the financial and commercial factors influencing the financing of BOT projects in Kenya	Financial factors	Construction cost	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
		Operation cost	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression	Quantitative/Qualitative

					- Wald	
		Maintenance cost	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
Assess the environmental factors influencing the financing of BOT projects in Kenya	Environmental factors	Environmental safety concern	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
		Public opinion	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
	Moderating variables					
Political and legal factors	Political and legal	Legal framework for realizing BOT	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative

		Out of control risk	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
		Effectiveness of the privatization agency	Ordinal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald	Quantitative/Qualitative
	Dependent variable					
Financing of BOT Railway Projects	Financing	- Influence - Not influence	Nominal	Mixed methods	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Multivariate analysis	Quantitative/Qualitative

Table 3.4: Hypothesis testing techniques

Objectives	Null hypotheses	Analysis techniques	Output
1. Determine how macro-economic factors perceived to influence financing of BOT projects in Kenya.	**H₀** There is no significant relationship between perceived macro-economic factors' influence and financing of the BOT railway projects in Kenya.	- Frequency distribution with percentages - Cross tabulation with percentages - Binary logistic regression - Wald test	- Frequency tables - Frequency table with percentage within - Hosmer-Lemeshow goodness-of-fit statistic,Nagelkerke's R^2,
2. Establish the extent to which investment policy perceived to influence financing of BOT projects in Kenya.	**H₀** There is no significant relationship between perceived investment policy's influence and financing of BOT railway projects in Kenya.	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald test	- Pearson's Chi Square - β coefficients, - Odds ratios, - Hosmer-Lemeshow goodness-of-fit statistic - Nagelkerke's R^2
3. Determine how financial and commercial factors perceived to influence financing of BOT projects in Kenya.	**H₀** There is no significant relationship between perceived financial and commercial factors' influence and financing BOT projects in Kenya.	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald tests	- Pearson's Chi Square - β coefficients, - Odds ratios, - Hosmer-Lemeshow goodness-of-fit statistic - Nagelkerke's R^2

4.	Assess how environmental factors perceived to influence financing of BOT projects in Kenya.	H_0 There is no significant relationship between perceived environmental factors' influence and financing BOT projects in Kenya	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald test	- Pearson's Chi Square - β coefficients, - Odds ratios, - Hosmer-Lemeshow goodness-of-fit statistic - Nagelkerke's R^2
5.	Establish how political and legal factors moderate the perceived influence of macroeconomic factors, investment policy, financial and commercial factors and environmental factors and financing of BOT projects in Kenya.	H_0 There is no significant relationship between political and legal factors in moderating the perceived Macroeconomic, Investment policy, Financial and Commercial, environmental factors and financing of BOT projects in Kenya	- Frequency distribution with percentages - Cross tabulation with Chi-Square tests - Binary logistic regression - Wald test	- Pearson's Chi Square - β coefficients, - Odds ratios, - Hosmer-Lemeshow goodness-of-fit statistic - Nagelkerke's R^2

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents findings of the study which have been discussed under thematic and sub-thematic sections in line with the study objectives. The thematic areas include; demographic characteristics of respondents, Macroeconomic factors and financing BOT projects, Investment Policy and financing BOT projects, Financial factors and financing BOT projects, Environmental factors and financing BOT projects and Political and legal factors and financing BOT projects.

4.2 Questionnaire return rate

The researcher was interested in knowing about the questionnaires return rate. This owes to the fact that the return rate determines whether bias exists or does not. Nevertheless it was of importance because declining survey participation rates threaten the source of information and its perceived utility and thereby allowing for biasness in the data collected, (National Research Council, 2013). This was presented as in table 4.1.

Table 4.1 Sample population and response rate

Category	Sample size	Response rate	Percentage (%)
Operation Heads	132	111	27.6
Technical Staff	207	174	43.28
Senior Managers	44	39	9.7
Kenya Rail Monitoring Staff	15	12	2.96
Min. Transport	2	1	0.25
Min. Transport	2	1	0.25
Total	**402**	**338**	**84.04**

Table 4.1 shows that out of 402 questionnaires which were issued to the respondents, 84.04% were returned and 15.96% were not returned. The reason why some questionnaires were not returned was that some of the respondents were heavily involved in the operations of the consortium and therefore had to travel to Uganda while some ERC staff were involved in planning for the launch of the standard gauge railway line from the Port of Lamu and therefore could not easily be accessed. According to Werner (2004), results from surveys with response rates above 80% are considered reliable. The study therefore had a response rate of 338 respondents that constituted 84.04% of the total population. From table 4.1 the response rate for senior managers was 9.7%, operation heads 27.6%, technical staff 43.28%, Kenya Rail Monitoring staff 2.96% and finally representatives from the ministry of transport and finance officials at 0.25% each respectively. The senior managers' response rate was high, 39 out of 44 that is equivalent to 88%.

This was because all senior managers of the rift valley consortium are housed in an open office; therefore administering questionnaires was easy to coordinate.

Secondly, they are more directly involved in the day-to-day operations of the consortium. It was also easier to conduct an interview in a single room as the desks were arranged in an open space therefore little time was utilised. This was followed by operation heads who are people involved in the day-to-day running of the consortium activities and were also stationed at the concession headquarter, they were also acquainted with information sought by the study and therefore answering the questionnaires was not quite involving. Their duties therefore involved monitoring the contract operations. The technical staff also performed administrative duties of running the consortium, this involved trading in the share market, transacting bank business and seeking for serious partners engaged in the concession. This gave them the advantage in answering the questionnaires.

The Rail monitoring staffs engaged with the activities of monitoring the performance of the consortium and reported to the senior managers on a day to day basis and therefore were also acquainted with the factors that influence financing of the concession which is among BOT projects. They were also stationed at the headquarters within the premises of the consortium. This explains the high rates of response. Officials from the ministry of transport and finance could not all be reached because of the activities within the ministry. Their duty in the consortium was to attend a board meeting which took place once in every two months. This meant that on the other days, they performed their normal duties in the ministry therefore the researcher had to book for an appointment to interview the officials which took a lengthy time and only one among the two in their respective could be reached during the period of research.

4.3 Demographic characteristics of respondents

The study was interested in the assessing whether gender, age, years of service of the respondents in order to establish how they are related to the understanding of the consortium's operations which would influence financing of BOT. These are further discussed in the following subsequent themes;

4.3.1 Distribution of respondents by gender

Gender differences are complementary; individuals, our collective humanity, and society as a whole, all benefit from masculine and feminine characteristics. We are better for having men with a clear understanding of their masculinity and women with a clear understanding of their femininity the respondents were therefore asked to state their gender and the result shown in table 4.2

Table 4.2: Distribution of respondents by gender

Gender	Frequency (f)	Percent (%)
Male	219	64.8
Female	119	35.2
Total	**338**	**100.0**

A total of 338 responses were obtained in this study and secured for data analysis. From the table 4.2, the majority of the respondents were male 216 (64.8%) as compared to female 119 (35.2%). This implies that there were more male working for the consortium than female, however the situation conforms with one-third rule of either gender as per the constitutional requirement.

4.3.2 Distribution of respondents by age

The study was interested in age of the respondents in order to establish how age was related to the understanding of the consortium's operations and the experience one had in managing the day-to-day activities of the consortium. Therefore the respondents were asked to state their age and the results are as shown in table 4.3.

Table 4.3: Distribution of respondents by age

Age bracket	Frequency (f)	Percent %
18 - 25 years	21	6.2
26 – 35	79	23.4
36 - 45 years	121	35.8
46 - 55 years	98	29.0
above 55 years	19	5.6
Total	**338**	**100.0**

From the table 4.3, Majority of the respondents are between the ages of 36 – 45 years accounting for 121 (35.8 %) followed by 98 (29%) at the age 46 to 55 years. 79 (23%) are in the age bracket of 26 to 35. 21 (6.2%) who are in the age of 18 to 25, followed by only 19 (5.6%) who are over 55 years of age. The composition of these respondents indicates that majority of the respondents who are working for the consortiums are from the elderly age group (36 to 44 years old). Therefore the consortium might have absorbed majority of the workers from the East Africa Rail Cooperation (ERC).

4.3.2 Distribution of respondents by years of service

The study was interested in establishing the distribution of respondents by years of service was due to their increased knowledge of the consortium's operations and challenges that may have arose during the time of change in management. Respondents were asked to state there year in service. The results are as shown in table 4.4.

Table 4.4: Distribution of response by period served

Years of service	Frequency (f)	Percent (%)
2 - 5 years	117	34.6
6 - 10 years	55	16.3
11 - 15 years	154	45.6
over 15 years	12	3.6
Total	**338**	**100.0**

The result from table 4.4 indicates that out 338 respondents, 154 (45.6%) had served for between 6 to 10 years. 117 (34.6%) had served between 2 to 5 years. 55 (16.3%) had served between 11 to15 years, followed by only 12 (3.6%) who had served for 15 years and above. Therefore, majority of the workers had served for a period of 11 to 15 years. This implies that these employees were absorbed from the former EAR due to their experience in management (45.6%), whereas, those who had served for 2 – 5 years constitute 34.6%, therefore implying that there was need for specific expertise which prompted the concession to employ more and therefore given that majority of the employees had accumulated experience in the consortium's

operations, it was expected that the operations of the consortium would be effectively and efficiently run due to the existing wealth of experience.

4.4 Macroeconomic factors and financing build Operate Transfer projects

One of the first objectives that the study was out to establish was how macroeconomics factors influence financing of BOT projects. A large and growing body of literature provides evidence that overall economic conditions strongly influence financial markets, change market participants and perceptions of the fundamental value of assets. This study focused on macroeconomic factors such as; interest rates, inflation rates, and debt and equity ratios. These are discussed as follows;

4.4.1 Interest rates and financing of BOT projects

The study was interested in establishing interest rates as a component of macroeconomic factors influencing financing of Build Operate Transfer projects, Interest rates are commonly used as a measure of the cost of borrowing money and changes in this cost have an important effect on aggregate demand in an economy Thus respondents were asked to state their opinion on interest rates influence on financing of BOT projects on the scale of very low, low, moderate, high and very high and the results are as shown in table 4.5

Table 4.5: Interest rates and financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	56	16.6
Low	26	7.7
Moderate	38	11.2
High	72	21.3
Very high	146	43.2
Total	**338**	**100.0**

Table 4.5, depicts that 146 (43.2%) of the respondents responded that interest rates influence was very high, 72 (21.3%) responded it was high, 56 (16.6%) responded that it was very low, 38 (11.2%) moderate and only 26 (7.7%) responded it was low. This results show that a total of 218 (64.5%) of the respondents agrees that interest rates influence financing BOT projects. It further implies that when Interest rates changes by 1% BOT financing changes by 1.6 time (1+64/100).The findings of this study confirms the findings of a study done by Edakasi (2011) in Uganda on effect of interest rates on loan repayment. His findings reveal that interest rates offered featured more frequently. Respondents in his research criticized the high interest rate as factors behind loan repayment and that it was affecting their business growth and performance accounting to 70% and that "the interest rate charged was high.

From the frequency table result created a desire to show the relationship between BOT financing and interest rates through a side-by-side comparison of how different groups responded on the two variables, across tabulation was conducted and the results are as shown in table 4.6;

Table 4.6: Cross tabulation of interest rates influence on financing Build Operate Transfer projects

Financing for BOT	Interest Rates					Total
	Very low	**Low**	**Moderate**	**High**	**Very high**	
Influence	41 (19.2%)	17 (8. %)	24 (11.3%)	40 (18.8%)	91 (42.7%)	**219 (65%)**
Does not influence	15 (12%)	9 (7.2%)	14 (11.2%)	32 (25.6%)	55 (44%)	**125 (35%**
Total	**56 (17%)**	**26 (8%)**	**38 (11%)**	**72 (21%)**	**146 (43%)**	**338 (100%)**

The results from table 4.6, indicates, that 91 (42.7%) of the respondents noted that interest rates influence financing BOT projects at a very high level, followed by 41 (19.2%) indicating very low level of influence. 40 (18.8%) high influence, 24 (11.3%) moderate while only 17 (8%) indicated low. However 55 (44%) of the respondents responded that interest rates does not influence financing of BOT projects at a very high level, 32 (25.6%) indicated that it does not influence, followed by 15 (12%) very low level, 14 (11.2%) responded that it does not influence at moderate level and only 9 (34.6%) respondents indicated it does not at a low level. This implies that the influence is as high as indicated by the majority of the respondents 219 (65%) compared to those who responded that there was no influence at 125 (35%). Therefore there when interest rates increase or decreases by 1 percent financing of BOT projects changes by 1.7 (1+65/100) times either way, which is higher, compared to the result of percentage frequency table 4.5.

4.3.2 Inflation Rates and financing BOT projects

The study was interested in establishing inflation rates' influence on financing of BOT projects, as a component of macroeconomic factors. During a high inflation period, wide fluctuations in the currency make it difficult for concessioners to predict the future and accurately calculate prices and returns from their projects. Therefore, it can undermine investors' confidence and at the same time, weaken its competitive position in the international market. Thus, respondents were asked to state their opinion on influence of inflation rates on financing of BOT projects as measured in a scale of very low, low, moderate, high and very high and the results are shown in table 4.7.

Table 4.7: Distribution of level of response on influence of inflation rates on financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	52	15.4
Low	38	11.2
Moderate	44	13.0
High	96	28.4
Very high	108	32.0
Total	**338**	**100.0**

Results on table 4.7 indicates that 108 (32.0%) of respondents responded that inflation rates influence financing BOT projects was very highly, followed by 96 (28.4%) of the respondents indicated a high level influence 52 (15.4%) at a very low level, 44 (13.0%) at moderate level only 38 (11.2%) at a high level. The study concludes that inflation rate influence financing of BOT projects. Its implication is that when inflation rate rises by 1% financing of BOT project changes by 1.3

(1+32/100) time. This finding supports Rasmusen (2001) who postulated that due to unfavourable consequences of inflation that assumed an intolerable dimension and is attributed to the expansion of public expenditure arising from the domestic borrowing, which culminates, into a vast expansion of aggregate demand and the inelastic supply of finances, which further impacts negatively on monetary institutions at the exposure of concessionaires.

In presenting the relationship between two or more survey questions by providing a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted a cross tabulation and the results are as shown in table 4.8.

Table 4.8: Cross tabulation showing inflation rates influence on financing Build Operate Transfer projects

Financing BOT	Inflation rates					Total
	Very low	**Low**	**Moderate**	**High**	**Very high**	
Influence	37(17.4%)	26(12.2%)	28(13.1%)	59(27.7%)	63(29.6%)	**213(63%)**
Does Not Influence	15(12.0%)	12(9.6%)	16(12.8%)	37(29.6%)	45(36.0%)	**125(37%)**
Total	**52(15.4%)**	**38(11.2%)**	**44(13.0%)**	**96(28.4%)**	**108(32.0%**	**338(100.0%)**

Table 4.8, depicts that 63 (29.6%) of respondents responded that inflation rates influence financing BOT projects at a very high level. This is followed by 59 (27.7%) at a high level, 37 (17.4%) at a very low level, 28 (13.1%) moderate level and 26 (12.2%) low level. However, 45 (36%) respondents indicated that inflation rates do not influence financing BOT projects at a very high level, 37 (29.6%) noted that it does not influence at a high level. 16 (12.8%) indicated that it does not influence financing of BOT at a moderate level, followed by 15 (12%) who also agreed that the

109

influence does not influence at very low level and finally 12 (9.6%) respondents consented that the influence was low. In total those who responded that there is an influence across all levels was 213 (63%) compared to those who responded that there was no influence who were 125 (37%).

Therefore the difference in the column percentages for survey respondents in the category of Inflation rates Influence on BOT projects when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of very highly influence which was 63% thus therefore inflation rate influence financing of BOT projects. This implies that if inflation rate changes by 1% financing BOT changes by 1.6 (1+ (63/100) times either way. These results are in agreement with a study by Honoham and Lane (2003) on exchange rate matter for inflation during the periods of Euro appreciation (2002-2003) as well as during the periods of Euro depreciation (1999-2001). That high exchange was as a result of inflation rate. These results were different from the findings of Aigbokhan (1991) on a study of the level of real exchange rate as primary determinant of the rate of inflation in Mexico during the 1980s and 1990s and that the result of high inflation was due to the marginal differences in percentages within and without the levels. Aigbokhan study is in line with the findings of cross tabulations.

4.3.3. Debts and Equity ratios on financing BOT

The study was interested in establishing debts and equity ratio influence as a component of Macroeconomics factors on financing of BOT projects. This is because maximizing the wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a negative correlation in the decision and it has to be as minimum as possible. Also changing the capital structure composition in a firm can increase its value in the market. Therefore the respondents were asked to indicate

the level of influence of debts and equity ratios on financing BOT projects measured in the scale of very low, low, moderate, high and very high levels and results are as shown in table 4.9;

Table 4.9: Distribution of level of response on debt/equity ratio influence on financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	70	20.7
Low	109	32.2
Moderate	51	15.1
High	39	11.5
Very high	69	20.4
Total	**338**	**100.0**

Table 4.9, indicates that majority of the respondents 109 (32.2%) stated that debts and equity ratio's influence financing BOT projects at a low level. followed by70 (20.7%) of the respondents indicated very low, 69 (20.4%) responded it was very high, 51 (15.1%) responded it was moderate, and 39 (11.5%) responded it was high, the study concluded that debts and equity ratio influences financing of BOT projects. The implication is that when debts and equity varies by 1% financing of BOT projects changes by 1.3 times (1+32/100). These result prompted further investigation.

In establishing the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the result shown in table 4.10

Table 4.10: Cross tabulation showing debts/equity ratios on financing Build Operate Transfer projects

Financing of the BOT	Capability of obtaining domestic debts					Total
	Very low	Low	Moderate	High	Very high	
Influence	51(23.9%)	62(29.1%)	33(15.5%)	27(12.7%)	40(18.8%)	**218(65%)**
Does not Influence	19(15.2%)	47(37.6%)	18(14.4%)	11(9.6%)	32(23.2%)	**120(35%)**
Total	**70 (20.7%)**	**109 (32.2%)**	**51 (15.1%)**	**40 (11.5%)**	**69 (20.4%)**	**338 (100%)**

As shown in table 4.10, 62 (29.1%) respondents responded that debts/equity ratio influence financing BOT projects at a low level followed by 51 (23.9%) at a very low level, 40 (18.8%) responded there was an influence at a very high level, 33 (15.5%) responded that there was moderate influence, and 27 (12.7%) at a high level. However, 47 (37.6%) respondents agreed that debts/equity ratios do not influence financing BOT projects at a low level, followed by 32 (23.2%) indicated that it does not influence financing BOT at a very high level, 19 (15.2%) said that it does not influence financing of BOT at a very low level, 18 (18.4%) responded that the influence does not exist at moderate level. only 11 (9.6%) respondents responded that it does not influence at a high level. Therefore the largest difference in the column percentages for survey respondents in the category of debts and equity ratio Influence on BOT projects when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of very low influence which was 23.9% thus the influence is very low. This means that there was no sufficient influence of debt and equity ratio on financing BOT projects Therefore, if debt and equity rate changes by 1% financing BOT does not change by 1.2 (1+ 23/100) times This can be misleading by just looking at the percentage without comparing the percent within,

112

which indicates that the influence of debts and equity ratio is high 218 (65%) compared to 120 (35%). The overall influence is 65% meaning that when Debts/Equity changes by 1% financing of BOT will change by 1.6 (1+65/100).

The findings of this study supports, Canning *et, al* (2000) study done in USA Harvard University which sought to determine how debts and equity ratio influence private financing, which was that high existing stock of government debts renders debt financing the least attractive mode of financing and hence it is insignificant. By Looking at the result critically within various levels the influence cannot be affirmed between debts/equity and financing BOT projects.

4.3.4 Discount rates and financing BOT projects

The study was interested in establishing discount rates influence as a component of Macroeconomics factors on financing of BOT projects. Knowledge of interest rates influence allows consumers to make better decisions about their loans and investments. Moreover, investors who seek protection from inflation in the fixed-income arena can look to instruments such as Treasury Inflation Protected Securities (TIPS), which pay an interest rate that is indexed to inflation. In addition, mutual funds invest in bonds, mortgages and senior secured loans that pay floating interest rates that periodically adjust with current rates. Therefore, the respondents were asked to indicate the level of influence as measured in the scale of very low, low, moderate, high and very high levels that discount rates has on financing BOT projects. The results were as shown in table 4.11.

Table 4.11: Distribution of response on discount rates and financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	94	27.8
Low	50	14.8
Moderate	61	18.0
High	54	16.0
Very high	79	23.4
Total	**338**	**100.0**

Results of the study in table 4.11 indicate that 94 (27.8%) of the respondents responded that discount rates influence financing of BOT at a very low level followed by 79 (23.4%) very high, 61 (18.0%) moderate, 54 (16.0%) responded it was high, and 50 (14.8%) responded that discount rates influence financing of BOT projects at a low level. Therefore, discount rate does not influence financing of BOT projects. This implies that if discount rates changes by 1% during construction, operation and transfer period, financing BOT project may change up to 1.3 times (1+27/100).

By looking at the percentages, one may be true to deduce that interest rate has no influence on financing BOT as shown by 27.8%, which may not be true if the direction of relationship of the variables is not establishing.

To establish the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are as shown in table 4.12.

Table 4.12: A cross tabulation showing discount rates and financing BOT projects

Financing of BOT	Discount rates influence on rail transport provision					Total
	Very low	**Low**	**Moderate**	**High**	**Very high**	
Influence	36(17%)	32(15%)	41(19%)	57(27%)	60(35%)	**226(67%)**
Does Not Influence	37(30%)	18(14%)	20(16%)	18(14%)	19(14%)	**112(33%)**
Total	**94(28%)**	**50(15%)**	**61(18%)**	**54(16%)**	**79(23%)**	**338(100%)**

Results in table 4.12, depicts that 60 (35%) responded that the influence was at a very high level, followed by 57 (27%) high, 41 (19%) at a moderate level, 36 (17%) of the respondents responded that discount rates influence financing of BOT projects at a very low and 32 (15%) at a low level, However 37 (30%) respondents said that discount rates do not influence financing BOT projects at a very low level, followed by 20 (16%) responded that it does not influence financing of BOT at a moderate level, 19 (14%) responded that it does not influence financing BOT at Avery high level, 18 (14%) who responded that the influence does not exist at high level and lastly 18 (14%) respondents responded that the influence of discount rates on financing BOT projects was low. By comparing the result in table 4.12, looking at the cross tabulation table indicates that the influence is very high. In total the overall influence is at 226 (67%) respondents who noted that discount rate influencing financing BOT projects, this findings overrides the early arrangement that discount is negotiated at the signing of the concession contracts. Only 112 (33%) responded that the influence does not exist.

In conclusion the largest difference in the column percentages for survey respondents in the category of discount rates influence on BOT projects when

compared across the groups defines by levels (very low, low, moderate, high and very high) was that there is an influence which was 67% compared to 33% who noted that there is no influence. Therefore if discount rate changes by a 1 % financing BOT projects changes by 1.7 (1+ (67/100) times. The findings supports the study Brealey, Myers, (1996) and Brigham, (1995) who investigated the opportunity cost of capital of investing in one project rather than in another – alternative – one. The finding shows that the loss incurred from opting for the first project and not the second – alternative – one is the opportunity cost. Making gains in the second project and not in the first one represents the capital gain opportunity. Therefore, the financial discount rate is used in the process of evaluation of the performance of an investment option.

These results are in line with the findings of Caballero and Pindyck (1992) who argued that a solution will exist if the discount rate is large enough so that the value of a firm remains bounded even if future entry is prohibited. In another study of PPP Unit of Ireland (2006) discount rates used for comparing a PPP project with an equivalent public sector project reflect the relative value of the cash flows from the State Authority's perspective, stressing that this same rate should be used in discounting all cash flows and also comparing a BOT project with an equivalent public sector project "should reflect the relative value of the cash flows from the State Authority's perspective. Instead, discount rate is based on the risk free cost of debt to the public sector – the yield on the appropriate long term Government Bond (the maturity of the bond presumably being the main characteristic of interest.

Hypothesis 1: There is no significance relationship between perceived macro-economic factors' influence and financing of BOT projects in Kenya

Results in the subsequent cross-tabulations conducted in the study were confirmed by performing hypothesis testing to in various macro-economic factors presented as indicators as revealed in the study.

There is no significant relationship between perceived variations in interest rate and the financing of the BOT project.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.311[a]	4	.0366
Likelihood Ratio	4.395	4	.0355
Linear-by-Linear Association	2.137	1	.0144
N of Valid Cases	338		

The chi-square test with a p Value of 0.0366 shown in the table reflecting the hypothesis 1 compared to level of significance of 0.05 indicates that there is sufficient evidence to conclude that there is a significant relationship between interest rates and financing of BOT projects. Therefore, we reject the null hypothesis and conclude that there is significance relationship between interest rate and financing BOT projects. This finding supports Burger *et al.,* (2009) in a study of Korea's PPPs performance, who established that Interest rates and access to financing were identified as the main channels through which the financial crisis has affected or expected to affect existing BOT projects and the pipeline. However, the real effects of the economic slowdown on the profitability of existing BOTs have also materialized with a 10 percent decrease in annual port traffic recorded in February 2009.

Timely project implementation was impaired by an extended preparation period necessary for feasibility and for the coordination of different interests during negotiations. The finding of this study supports Oke (2010) findings that interest rates and major challenge of government policies are bedevilled by needless bureaucratic bottlenecks that often make attracting private sector funding difficult. In supporting the results, Karlan and Zinman, (2008) propose an approach in determining levels of lending rates based on an assessment of clients' loan size sensitivity to interest rate changes. He argues that the relationship between interest rate and amount of loan is dependent on client's wealth status. While repayment rates provide an indication of the poor's response to changes in interest rates. Examining the joint influence of the latter and financing BOT projects may increase capital once it yields detailed information. These means that interest rate rise could be attributed to the borrowing at the local market by the concessionaire shareholder due to lack of enough capital to commence the project. Karlan and Zinman noted that projects could be influenced by adverse consequences of default from other sources including clients' multiple affiliation. The implication is that interest rate has a high influence on BOT financing.

There is no significant relationship between variation in the inflation rate and the financing of the BOT project

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.077[a]	4	.050
Likelihood Ratio	3.127	4	.050
Linear-by-Linear Association	3.043	1	.081
No. of Valid Cases	338		

From the data, the chi-square calculated gave a p value of 0.05 which is equal to 0.05 level of significant. The chi-square shows that there is sufficient evidence to reject the null hypothesis. Comparing the two χ^2, the calculated chi is equal to 0.05 confidence level. Therefore, we reject the null hypothesis. This means that there is significant relationship between variations in inflation rates and financing BOT projects. This study supports the findings by Visconti (2011), that BOT financed investments are highly exposed to inflation risk, especially if they are financed by foreign debt and located in developing countries with volatile currencies as the Kenyan case. This could also be attributed to the cost of materials used in repairing the rail project. Visconti argued that inflation risk may be mostly born by the concessioner and its banking lenders, and it represents a zero sum game with compensating winners and losers, up to a force majeure earth-quaking threshold. This could be the reason why partners in the consortium could not raise sufficient capital to finance the construction of the rail project. Citadel, centum and Ruwenzori who were partners in the concession were all located in the developing countries.

The findings supports Elbadawi (1990) study on inflationary process, stabilization the role of public expenditure in Uganda, he argued that the precipitous depreciation of the parallel exchange rate was the principal determinant of inflation. These could be the case to Kenya when the central bank was hit by dollar crises in 2012. This conclusion obviously agrees with the findings of Chibber and Shaffik (1990) with respect to Ghana economy. A major factor identified as strong influence of inflation as a propagating factor in inflationary process. Owosekun (1975) argued that flexible exchange rates would minimize the impact of inflation which could only be addressed if the concessionaires contribute significant amount at the start of the project to reduce domestic borrowing. The findings have indicated that inflation rate

119

has an influence on financing BOT projects. This implies that when inflation rate increases or decreases by 1%, financing BOT projects changes by 1.6 times either way.

Hypothesis 3: *There is no significant relationship between variation in debts/equity ratio and financing BOT project*

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	9.411[a]	4	.042
Likelihood Ratio	9.100	4	.049
Linear-by-Linear Association	4.426	1	.035
No. of Valid Cases	**338**		

The chi square test gave a p value of 0.042 which is below the confidence interval of 0.05. Therefore the study rejects the null hypothesis. This means that there is significant relationship between debts/equity ratios on financing of BOT projects. This could be attributed to the fact that investors did not have substantial capital during commence of the contract therefore borrowed from the local market finally, affecting the rates of borrowing by pushing it upward due to demand push factor. These finding is in disagreement with the study done by Canning *et, al*. (2000) to determine how debts and equity ratio influence private financing. The findings were that the high existing stock of government debts renders debt financing the least attractive mode of financing and hence it is insignificant. The study therefore comes out with a new finding. These could be attributed to the fact that while financing for existing concessionaires in BOT projects has not been affected by the crisis; new potential concessionaires have been hit by higher interest rates and lower access to

financing. Although the real effects of the economic slowdown on the profitability of existing BOT projects could not be quantified, lower demand was identified as the main channel of transmission of the crisis. This could be the reason why other partner within the consortium left due to insufficient capital contribution linked to interest rate within domestic market.

The P-value of components of macroeconomic factors indicate that interest rates has a significance value of 0.0366, followed by inflation rates with a significance value of 0.050, and lastly debts/equity ratios with a significance value of 0.042. This observed test statistics are in the critical region and therefore the null hypothesis was rejected and the study concludes that there is significant relationship between perceived macroeconomic factors and financing BOT projects.

In ascertaining the reliable evidence of the accuracy of commonly influencing estimator, the study conducted a Wald test in order to construct Confidence interval that have correct coverage probability with strengthen and direction of relationship between pairs of variables, among the macroeconomic factors and the results are as shown in table 4.13;

Table 4.13: Wald test showing comparative power functions of variables within Macroeconomic factors influence on BOT financing.

		B	**S.E.**	**Wald**	**Df**	**Sig.**	**Exp(B)**
				Variables in the equation			
	Interest	.012	.142	.007	1	.035	1.012
	Inflation	.153	.156	.955	1	.032	1.165
Step 1(a)	**Discount**	-.143	.107	1.776	1	.018	.867
	Debts/Equity Ratio	.113	.114	.975	1	.032	1.119
	Constant	-1.015	.346	8.617	1	.003	.362

Variable(s) entered on step 1: Interest, Inflation, Discount, Debts.

A Wald test gave the significance p-values as follows: Interest 0.035, inflation, 0.032, discount rates 0.018 and debt equity ratio of 0.032. The P-Values that were calculated indicated the four variables have significant influence on financing of BOT projects. In terms of their strength, interest rate has more influence compared to the other indicators as the result of both the Wald test and the significance move towards zero, which are a Wald of 0.007 and a significant of 0.003. Therefore, interest rate has the highest power of influence among the macroeconomic indicators. This is followed by inflation rate as the second highest predictor, with a Wald test of 0.955 and a significance of 0.32, followed by debt and equity ratio with a Wald 0.975 and a significant value of 0.32 and in the last position is the discount rate with a Wald figure of 1.776 and a significance of figure of 0.18. Therefore this verifies that the null hypothesises had to be rejected as indicated in other findings under each objectives of the study.

The study concluded that that any change in interest rate, inflation rate, debts/equity ratio, and discount rate will lead to change in financing BOT projects. Therefore, there is significant relationship between interest rate, inflation rate, debt and equity ratio, discount rate and financing BOT projects. Finally all predictor variables were found to have significant relationship with financing BOT projects.

In line with the pecking order Theory, low profitability increases the likelihood that internal sources of funds will be exhausted and that outside financing will be used as a substitute. Therefore, issuance of any security could be expected to be associated with relatively low profitability. However, the effect of profitability on the choice of the form of financing is not clear, describes the sample firms by issue type. Dual issuers' market-to-book ratio (2.304) is significantly higher than debt issuers' ratio (1.595) but is lower than equity issuers' ratio (2.861). Dual issuers' stock return (0.372) is significantly higher than debt issuers' return (0.184) but is not significantly different from equity issuers' return (0.352). Dual issuers tend to be significantly less profitable in the pre-issue years than debt issuers.

The return on assets (ROA) of an average dual issuer was 0.088. Supporting this conclusion, Owosekun (1975) argued that flexible exchange rates would minimize the impact of inflation. The findings of this test of significance could be attributed to the fact that maximizing the wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a negative correlation in the decision and it has to be as minimal as possible. It can also be seen that changing the capital structure composition in a firm can increase its value in the market a question asked by (Owosekun, 1975).

To summarize the discussion under macroeconomic variables such as interest rate, were found that the all have correlation value. This reflected that those variables had significant relationship toward financing BOT projects and that financing BOT projects was low, which was the same with the relationship between inflation rate and financing BOT projects. Also shown is the relationship between debts and equity, discount rate and financing BOT projects hence a low participation of private investors in financing BOT projects. According to Kobina (2010) the loan size, lending rates of microfinance sector combined with effect of interest rates and poverty levels of microfinance clients reveals the expected inverse relationship between the 20th to 40th quintile range on different poverty groups of MF I clients and observed that a change in interest rate leads to varying responses for the demand of loan amount.

Aigbokhan showed that the level of real exchange rate was a primary determinant of the rate of inflation in Mexico during the 1980s and 1990s.In support of the finding Chhibber developed a detailed econometric model, which takes into account both monetary and structural factors while investigating the causes of inflation in Zimbabwe. The finding indicates that monetary growth, foreign price, exchange rate, interest rate, unit labor cost and real income, are the chief determinants of inflation in developing countries. However, only one variable was significant. In pecking order Theory, low profitability increases the likelihood that internal sources of funds will be exhausted and that outside financing will be used as a substitute. Therefore, issuance of any security could be expected to associate with relatively low profitability. However, the effect of profitability on the choice of the form of financing is not clear as describes by the sampled firms issue type. The return on assets (ROA) of an average dual issuer was 0.088. Supporting this conclusion,

Owosekun (1975) argued that flexible exchange rates would minimize the impact of inflation Debts and equity.

4.4 Investment Policy and financing of BOT projects

The second objective the study sought to achieve was to establishing the extent to which investment policy influences financing of BOT projects. This was achieved through sub-variable such as construction period, concessional period and contract period. These are further discussed as follows;

4.4.1 Construction Period

The study was interested in establishing construction period's influence as a component of Investment policy factors influence in financing of BOT projects. Construction risks and uncertainty characterize situations where actual outcome for a particular event or activity is likely to deviate from the estimate or forecast value. The respondents were therefore asked to state their opinion on how construction period influence financing of BOT projects as measured in the scale of very low, low, moderate, high and very high levels. The results are as shown in table 4.14;

Table 4.14: Distribution of response on construction period's and financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	69	20.4
Low	65	19.2
Moderate	28	8.3
High	60	17.8
Very high	116	34.3
Total	**338**	**100.0**

Table 4.14 show that, out of 338 respondents who participated in the study, majority 116 (34.3%) respondents agreed that construction period influences financing of BOT at a very high level, This is followed by 69 (20.4%) at very low level, 65 (19.2%) at low levels, 60 (17.8%) responded that construction periods influence financing of BOT projects at high levels, whereas 28 (8.3%) responded that construction periods influence financing of BOT projects moderately. Thus this implies that increasing construction period by 1 (one) day increasing the chances of financing BOT projects by 1.3 (1+20/100) times. This reflects that construction period influence financing BOT projects. This can be attributed to the respondent's argument that the longer the construction period the better the contract, as initial capital investment requires large amount, hence recovering initial invested capital takes long. This finding is in line with Vervoot *et al.,* (2013) who argue that long-term projects with incomes or expenses in the future, take price level development into

account at the beginning of the project in order for investors to know the size of their expenses, period of construction and revenues generated in the future.

The results in frequency table 4.14 prompted further investigation to establish relationship between two or more survey questions which provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are as shown in table 4.15.

Table 4.15: Cross tabulation showing construction period's and financing Build Operate Transfer projects

Financing Of BOT	Construction period's effect on financing BOT projects					
	Very low	Low	Moderate	High	Very high	Total
Influences	42(20%)	40(19%)	14(7%)	39(18.3%)	78(37%)	**213(67%)**
Does not influence	27(22%)	25(20%)	14(11.2%)	21(16.8%)	38(30.4%)	**125(33%)**
Total	**69(20.4%)**	**65(19.2%)**	**28(8.3%)**	**60(17.8%)**	**116(34.3%)**	**338(100.0%)**

Results in table 4.15, reveal that, 78 (37%) respondents responded that construction period's influence financing BOT projects at a very high level. followed by 42 (20%) at a very low level. 40 (19%) responded that the influence is at a low level, 39 (18.3%) responded it was high and only 14 (7%) responded that the influence was at a very low level. whereas 38 (30.4%) respondents responded that construction period does not influence financing BOT projects at a very high level, 27 (22%) indicated that it does not influence at a very low level, 25 (20%) said that it does not influence financing of BOT at a low level with 38 (30.0%) who also responded that the influence does not exist at high level and 14 (11.2%) respondents responded that constriction period do not influence financing BOT projects at a moderate level.

This shows that construction period influence on financing BOT is very high meaning that increasing constriction by 1 day increases the chance of financing BOT by 1.7 times (1+67/100) times. This reflects that the variable has a significant relationship towards financing BOT projects. According to (Wold Bank, 2005) construction period analysis suggests that between 32% and 36% of the PFI projects experienced variation-related cost escalation and failed to provide price certainty to the public sector due to the length of the contract This survey finds that, for 29 projects out of 107 (27%), contractors faced increased costs comparing to the 25years concessional contract which seems to have attracted less cost overrun.

Kriegler *et al.,* (2006) attributed this to the fact that operating funds from the Off-taker generally will not begin flowing until construction is complete and the project is accepted, the Concessionaire's capital is also the only source of funds for debt service for the whole of the construction period including the construction time.

4.4.2 Contract Period and financing BOT projects

The study was interested in establishing contract period's influence as a component of investment policy factors on financing of BOT projects. Due to the long contract periods of BOT projects, various unforeseen uncertainties might be occurring which had not been anticipated during the initial signing of contracts, and hence the need to study the construction period's influence on financing BOT projects to protect the financial interests of all parties concerned. The respondents were asked for their opinions concerning the contract period's influence on financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results are as shown in table 4.16;

Table 4.16: Contract period's and financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	44	13.0
Low	50	14.8
Moderate	48	14.2
High	80	23.7
Very high	116	34.3
Total	**338**	**100.0**

Table 4.16 depicts 116 (34.3%) of the respondents responded that contract period influences financing of BOT projects at a very high level, this is followed by 80 (23.7%) at high level, 48 (14.8%) at moderate, 44 (14.2%) at low level and 44 (13.0%) among the respondents responded that the contract period influence was very low. We can conclude that influence financing BOT projects highly. Implying that increase construction period by one day increases the chance of financing BOT projects 1.3 times (1+34/100). This reflects that the variable contract period had a significant relationship toward financing BOT projects. This shows that contract period influence was very high. This indicates that the longer the contract period, the higher the chances of financing BOT projects.

To show the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and results are as shown in table 4.17;

Table 4.17: Cross tabulation on Contract period and financing BOT projects

Financing BOT	Rating the Contract period and its benefits to concessionaires					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	22(9.7%)	16(7.1%)	29(12.8%)	56(24.8%)	103(45.6%)	**226(68%)**
Does not influence	10(0.9%)	16(1.3%)	26(3.2%)	14(2.5%)	46(11.1%)	**112(32%)**
Total	**32(9.5%)**	**32(9.5%)**	**55(16.3%)**	**70(20.7%)**	**149(44.1%)**	**338(100%)**

Results in table 4.17, depict that majority,103 (45.6%)respondents responded that contract period influence financing of BOT projects at a very high level, 56 (24.8%) at a high level, 29 (12.8%) at a moderate level, 22 (9.7%) at a very low level and 16 (7.1%) at a low level. With those who responded that constructions period does not influence, 46 (11.1%) of respondents indicated that there is no influence to financing BOT projects at a very high level, 14 (12.5%) at a high level, 26 (3.2%) at moderate level 16 (14.3%) at a low level, and 10 (8.9%) at a very low level.

With the overall majority of 226 (68%) supporting that constructions period have a great influence on financing of BOT compared to 112 (32%) who indicated that there is no influence. This means that construction period has an influence in financing BOT projects. The implication is that when contract period increased by one day financing of BOT projects changes by 1.7 (1 + 68/100) times. On the other hand, fixed price contract is always awarded to the low cost concessionaire, but minimum profit guarantee results in adverse selection. In this setting, as the period lengthen the increase in the number of bidders – increases the fixed price contract become more advantageous. Profit guarantee is preferable if the variance of profit requirement is high and the variance of cost is low.

4.4.3 Investor's benefits from the concessional period and financing BOT

The study was interested in establishing Investor's benefits from the concessional period and financing BOT. Due to the benefit accrued to investor at the time of investment makes the investor accept either the contract or refuse to enter into contract. If the benefit accrued are more than losses then the concessional period become more attracting. The respondents were asked to state their opinions on benefit of concessional period as measured in the scale of very low, low, moderate, high and very high levels and the results are shown in table 4.18;

Table 4.18: investor's benefits from the concessional period on financing BOT

Scale of measurement	Frequency (f)	Percent (%)
Very low	65	19.2
Low	68	20.1
Moderate	77	22.8
High	55	16.3
Very high	73	21.6
Total	**338**	**100.0**

Results in table 4.18 reveals that 77 (22.8%) of the respondents responded that concessional period influences financing of BOT projects at moderate level, very high 73 (21.6%) at low 68 (20.1%), very low 65 (19.2%) and high 55 (16.3%). In conclusion investors benefit influence financing of BOT projects. Therefore when investors benefit increases by 1 shilling BOT projects attracts investment by 1.2 times (1+22.8/100) at moderate level holding other variables constant. This shows that investor benefits were moderate. The findings supports Delmon (2000) who argues that sources of risk which is an element of concession period should be considered

that is; capital budget, construction time, construction cost, operation cost, politics and policies, market conditions, stakeholders' cooperation and credibility as well as global economic environment as all determine investor benefits. This is also supported by De Menza and Webb (1987) who revealed that resulting level of investment is socially suboptimal. In the first−best equilibrium with risk neutral investors, all projects with expected returns equal to the world rate of return will be undertaken.

But when information is distributed asymmetrically, some such projects will not be financed. The first−best equilibrium can then be restored if the government provides an interest−rate subsidy. In line with the findings, Brunetti *et al.,* (2009) argued that promoters are interested in maximizing their own net worth; they will compare the returns they reap when they maximize the value of the firm with those they receive by taking out funds until they exhaust the resources available to them under the provisions of the interest guarantee.

To show the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the result shown in figure 4.19:

Table 4.19: Cross tabulation showing investors' benefits from the concessional period influence on financing BOT projects

Financing of BOT	Investors benefits from the concessional period					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	9(4.0%)	13(5.8%)	24(10.6%)	61(27.0%)	119(52.7%)	**229(68%)**
Does Not Influence	10(3.9%)	12(4.7%)	32(18.6%)	44(19.3%)	14(12.5%)	**112(32%)**
Total	**19(5.6%)**	**25(7.4%)**	**56(16.6%)**	**105(31.1%)**	**133(39.3%)**	**338(100%)**

Table 4.19, shows that out of 338 respondents who participated in the study 119 (52.7%) of the respondents responded that investors benefits influence financing BOT projects at a very high level, 61 (27%) at high level, 24 (10.6%) at moderate level 13 (5.8%) at low level and 9 (4%) at very low level. Very few respondents responded that investor's benefits do not influence the financing of BOT. As indicated in the table 14 (12.5%) responded that there is no influence at high level, 44 (19.3%) at high level, 32 (18.6%) at moderate level, 12 (4.7%) at low level and 10 (3.9%) at very low level. Therefore there is influence between investor's benefits and financing BOT projects.

The finding implies that when investor's benefits increases by a shilling financing of BOT increases by 1.7 (1+68/100) times with overall majority of 226 (68%) supporting this compared to 112 (32%) who indicated that there is no influence. The results shows that financiers of BOT projects will make decisions based on the risks involved during the concession period to determine whether to finance or not to finance BOT project.

The findings of this study supports the study done by Zayed and Chang (2002) in China which established that lenders or investors are exposed to higher risk for the

133

BOT project due to high front end development costs, lengthy negotiation process and multiparty involvement which are risks that investors are exposed to during the concession period. However new development in this study is that promoters also face equal significant weight risk over the concession period.

4.4.4 Completion period by concessionaire on financing BOT project

The study was interested in determine completion period by concessionaire on financing BOT project .The respondents were asked to state their opinions on benefit of concessional period as measured in the scale of very low, low, moderate, high and very high levels and the results are shown in table 4.20

Table 4.20: Completion period of project by concessionaire and financing BOT project

Scale of measurement	Frequency (f)	Percent (%)
Very low	75	22.2
Low	76	22.5
Moderate	66	19.5
High	44	13.0
Very high	77	22.8
Total	**338**	**100.0**

Table 4.20 indicates that majority of the respondent 77 (22.8%) responded that completion period influences financing of BOT projects at a very high level, the results also shows that 76 (22.5%) responded that the influence is low, 75 (22.2%) responded it was very low, 66 (19.5%) responded that is was moderate while 44 (13.0%) of the respondents responded it was high. This indicates that completion period signed for during the contract by concessionaires influence financing BOT

projects very high, thus reducing concessionaire's period by one day reduces the chances of financing BOT projects by 1.3 times (1+22.8/100). The finding were surprising because completion cost is normally fixed in concessional contract and are based on the calculation of the cost benefit that is the capital contributed, contract period and operation period.

However, the findings confirms the findings of study by Shergold (2006) done in UK on environmental policy integration that revealed that the range of reports written about the infrastructure and about completion policy in defining capacity must specify the guide to financing and commercial viability. In showing the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are shown in table 4.21

Table 4.21: Cross tabulation showing completion period's influence on financing the project by concessionaire

Financing BOT Projects	Rating of the completion period of the rail project by concessionaire					Total
	Very low	Low	Moderate	High	Very high	
Influence	49(21.2%)	47(20.3%)	43(18.6%)	26(11.3%)	66(28.6%)	**231(68%)**
Does not influence	13(2.1%)	18(6.8%)	14(3.1%)	13(2.1%)	49(15.8%)	**107(32%)**
Total	**62(18.3%)**	**65(19.2%)**	**57(16.9%)**	**39(11.5%)**	**115(34.0%)**	**338(100%)**

In Table 4.21 out of 338 respondents majority 66 (28.6%) responded that completion period financing of BOT projects at a very high level, 26 (11.3%) noted high influence, 43 (18.6%) noted moderate influence, 47 (20.3%) noted a low influence and 49 (21.2%) noted a very low influence. In total those who responded that there is an influence were 231 (68%). The respondents who didn't feel that there

is an influence are 49 (15.8%) at very high level, 13 (2.1%) at a high level, 14 (3.1%) at a moderate level, 18 (6.8%) at a low level while those who responded that there is no influence a t a very low were 13 (2.1%). Therefore completion period influence financing BOT projects. This implies that reducing completion by 1 day reduces financing BOT by a number of 1.1 times (1+14.8/100). This confirms the findings of Shen *et al.,* (2002) done in china on benefits of concession periods, which established that a contract taking long to be completed, exposes the investor to losses and burdens thereby discouraging financiers to fund BOT projects.

4.4.5: Increase in expense on construction period and financing BOT projects

The study was interested in establishing how Increase in expense on construction period influence financing BOT Projects**.** The respondents were asked to state their opinions on benefit of concessional period as measured in the scale of very low, low, moderate, high and very high levels and the results are shown in table 4.22

Table 4.22: Increase in expense on construction period of project and financing BOT project

Scale of measurement	Frequency (f)	Percent (%)
Very low	71	21.0
Low	68	20.1
Moderate	73	21.6
High	62	18.3
Very high	64	18.9
Total	**338**	**100.0**

Table 4.22 depicts that majority 73 (21.6%) of the respondents responded that there was increase in expenses during construction period and the influence on

136

financing of BOT projects was moderate, followed by 71 (21.0%) very low, 68 (20.1%) low, 64 (18.9%) very high and 62 (18.3%).This therefore indicates that the influence of increase of expense on contraction period is relatively moderate and low respectively. Therefore increase of expenses in construction period influence financing of BOT project This means that if contraction expenses increase by 1 shilling financing BOT projects is changes by 1.2 (1+20.6/100) times and proportionately to the amount increased at moderate. Also revealed in the table is that expense may be very higher as shown by 18.9% indicating that when expense goes up by one shillings financing BOT projects changes by one 1.2 (1+18.9/100) at high and very high respectively. Therefore the findings prompted further investigation.

In establishing the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the result are as shown in table 4.23.

Table 4.23: Cross tabulation showing increase in expense and construction period of the project

Financing BOT	Rating the increase in expense on construction period of the rail project					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	34(15%)	34(15%)	34(15%)	26 (11%)	86(37%)	**234(69%)**
Does not Influence	11(11%)	11(11%)	13(13%)	19(18.3%)	45(43.3%)	**104(31%)**
Total	**45(13%)**	**70(21%)**	**47(28%)**	**45(13%)**	**131(39%)**	**338(100%)**

Table 4.23, reveals that 86 (37%) of the respondents responded that increase in expenses influence financing at a very high level, 34 (15%) noted it was moderate,

low and very low level then 26 (11%) at high level. 234 (69%) of the total respondents responded that construction expenses influence financing BOT project, while a total of 104 (31%) noted it does not influence, with 45 (43%) note very high, 19 (18.3%) at high level, 13 (13%) at moderate level, 11 (11%) at low level and 11 (11%) at very low level. Therefore increase in construction expense influence financing of BOT projects. This implied that when there is an increase in expenses by 1 shilling financing changes by 1.7 times (1+69/100). As reflected by overall 69%.

This finding provides more information by specific on the construction period`s impact on BOT financing where us Shen *et al.,* (2002) only analysed the risks involved in short concession period and their effect to BOT financing without being specific on each element of the concession period which includes construction timelines. Therefore the study has created a new knowledge.

4.4.6: Default by concessionaire on financing BOT projects

Sometimes a contractor fails to perform the work on a project by either not starting the project in a reasonable amount of time, or not completing the work, or failing to resume work in a reasonable amount of time this leads to abandonment. The respondents were asked to state their opinion on the default of concessionaires on financing BOT project as measured in the scale of very low, low, moderate, high and very high levels and the results are shown in table 4.24.

Table 4.24: Default by concessionaire in financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	66	19.5
Low	76	22.5
Moderate	68	20.1
High	38	11.2
very high	90	26.6
Total	**338**	**100.0**

Table 4.24 indicates that 90 (26.6%) responded that default by concessionaires influences financing of BOT projects at a high level, followed by 76 (22.5%) at low level, 68 (20.1%) at moderate level, 66 (19.5%) at very low level and 38 (11.2%). Therefore concessionaires may not complete the project. Meaning that there is likelihood of the concessionaires defaulting 1.3 times (1+26.6/100) in completing the project. These findings are contrary to the concession contract agreement that stipulate that contracts cannot be terminated before the end of the concession contracts, and therefore necessitated further test. To shows the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study across tabulated the data and the result are as shown in table 4.25.

Table 4.25: Cross tabulation showing default by concessionaire financing BOT projects

Financing Of BOT	Rating of the default by concessionaire in constructing the rail project					
	Very low	Low	Moderate	High	Very high	Total
Influence	38(16%)	48(19.7%)	42(17.2%)	20(8.2%)	96(39.3%)	**244(72%)**
Does not influence	18(19.1%)	17(18.1%)	18(19.1%)	13(13.8%)	28(29.8%)	**94(28%)**
Total	**56(16.6%)**	**85(19.2%)**	**60(17.8%)**	**33(9.8%)**	**124(36.7%)**	**338(100%)**

Table 4.25, indicates that 96 (39.3%) of the respondents noted the influence is very high, followed by 48 (19.7%) noting that the influence is low, 42 (17.2%) noted that the influence is moderate and 38 (16%) responded that the influence is very low. Overall 244 (72%) of the respondents responded that the influence exist. However, 94 (28%) of the respondents responded that there was no influence with 28 (29.8%) indicating that there is no influence at a very high level, 13 (13.8%) responded that there is no influence at a high level, 18 (19.1%) noted that the influence does not exist at moderate level, 17 (18.1%) responded that there is no influence at low level and 18 (19.1%) noted that there is no influence at a very low level. Comparing those who responded that there is influence with those who said that there is no influence, the study has found out that the influence is so high.

Hypothesis 2: There is no significant relationship between perceived investment policy influence and financing of the BOT projects in Kenya

This was the second hypothesis tested in the study to establish relational strengths within indicators under investment policy.

140

Variation in construction period has no significant influence on financing of the BOT project

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.762[a]	4	.029
Likelihood Ratio	10.612	4	.031
Linear-by-Linear Association	3.287	1	.070
N of Valid Cases	338		

The Chi square test in the table has given a p value of 0.029 which is less than a confidence interval of 0.05, therefore indicating that the result are statistically significant hence we reject the null hypothesis, therefore there is significant relationship between variations in construction period and BOT financing. This finding supports Loosemore (2007) who found that if government makes tremendous changes in output speciation during construction, then the government should allow certain extension of the construction period and provide some degree of financial compensation. In support of hypothesis finding Botton and Keneth (2002) suggests that, somewhat counter intuitively, PPP construction schedule performance is slightly worse than the sample average (37% of projects behind schedule, compared with 34%). As before, however, the difference is possibly not significant given the smaller sample size associated with the disaggregate analysis.

Contract period has no significant influence of contract period has on financing of BOT railway project.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.916[a]	4	.005
Likelihood Ratio	14.917	4	.005
Linear-by-Linear Association	3.004	1	.083
N of Valid Cases	338		

The chi square test gave a p - value of 0.005 which is below 0.05 confidence level. This indicates that there is a significant relationship, thus we reject the null hypothesis. This show that contract period influences financing BOT projects. Even though the period is agreed upon at the commencement of the contract, many factors may alter the directional of the project, therefore delaying or expediting construction. This finding adds more information on the impact of the contract period that was not clearly brought up by Brinckerhoff (2001) studies done in India. His study established that cost overrun occurs during constructions, price fluctuations, inaccurate estimating, delays, and additional work during contract periods, and fraudulent practices and kickbacks with or without taking into consideration of contract period. This study comes out with the new findings that the longer the contract period the higher the chances of financing BOT projects.

The P-value of components within investment policy indicates that construction period has a significance value of 0.029, followed by the contract period with a significance value of 0.005. This observed test statistics are in the critical region and therefore the null hypothesis was rejected and the study concludes that

there is significant relationship between perceived investment policy influence and financing BOT projects.

These findings prompted a further test to establish the power of each indicator in the variable and Wald test was conducted and the results shown in tabulated table 4.26;

Table 4.26: Wald test Wald test showing comparative power functions of variables within Investment Policies influence on financing BOT projects

		B	S.E.	Wald	df	Sig.	Exp(B)
	Variables in the equation						
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	**PERIOD1**	-.174	.087	3.983	1	.046	.841
	PERIOD2	.131	.102	1.645	1	.020	1.139
	INVESTB	-.042	.111	.144	1	.017	.959
	COMPLETP	.057	.106	.288	1	.049	1.058
	EXPENCE	.233	.102	5.241	1	.022	1.262
	DEFAULT	-.064	.110	.343	1	.045	.938
	Constant	**-.973**	**.378**	**6.606**	**1**	**.010**	**.378**

Variable (s) entered on step 1: Period1, Period2, Investb, Completp, Expence, And Default.

The result in table 4.26 depicts the values of a Wald test statistic for coefficient corresponding to the variables construction period as 3.983, with a p-value of 0.046 followed by contract period coefficient as 1.645 with p value of 0.020, investors benefits coefficient as 0.144 and a p-value of 0.017, completion period coefficient of 0.288 with a p-value of 0.049, experience coefficient of 5.241 and a p-value of 0.022, and finally default by concessionaries coefficient of 0.343 with p

value of 0.045. Therefore contract period among the indicator has more power in terms of influence, therefore validates the rejection of all the null hypotheses under this section. The findings adds new knowledge to the study of Thomas *et al.,* (2007) that concentrated on concession period without being specific to each element of the concession. This study therefore has analysed concessionaires default influence on BOT project financing which is not biased to one party in the concession. This is by ranking the strength of the influence of each variable. This finding further provides more information specifically on the construction period`s impact on financing BOT where us Shen *et al.,* (2002) only analysed the risks involved in short concession period and their effect to BOT financing without ranking the strength of influence of each variable on financing of BOT projects.

4.5 Financial factors influencing financing of build operate transfer projects

This was the third objective that the study was out to achieve and areas of focus includes, construction costs, operations costs and maintenance costs respectively, these are further discussed in the following subsequent themes;

4.5.1 Construction costs and financing BOT projects

The study was interested in establishing construction cost's influence as a component of investment policy factors influence in financing of BOT projects. Increasing construction costs raise the price of the project costs. The respondents were asked on their opinions on the influence of construction costs on financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results are as indicated in table 4.27;

Table 4.27: Construction costs influence on financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	44	13.0
Low	110	32.5
Moderate	87	25.7
High	44	13.0
Very high	53	15.7
Total	**338**	**100.0**

Table 4.27 reveals that, 110 (32.5%) among the respondents noted low influence, followed by 87 (25.7%) at moderate, 53 (15.7%) at very high, 44 (13.0%) at high and 44 (13.0%) at high and very low levels respectively. The result indicates that financing BOT is not pegged on construction cost. This result implies that by increasing construction cost by one shilling will not reduce financing BOT project by similar margin. These findings contradicting the findings of Alexanderson and Hulten, (2009), which identified complicated contracts and hold-ups, lack of flexibilities in long-term contracts, cost of contract in the long run and higher capital costs as major factors. This is, when the period is long construction cost may go higher which finally will have influence on financing BOT projects. Since constructions' period takes long before the project is completed many changes do occurs which change the direction of the project and therefore further investigation was done and by conducting across tabulation and the results obtained are as in table 4.28;

Table 4.28: Cross tabulation showing construction cost's influence on financing Build Operate Transfer projects

Financing BOT	Rating of the dependency on contractors in meeting construction costs					
	Very low	Low	Moderate	High	Very high	Total
Influence	30(12 %)	40(16%)	57(23%)	67(27%)	75(30%)	**249(74%)**
Does not Influence	14(16%)	23(26%)	20(23%)	17(19%)	15(17%)	**89(26%)**
Total	**44(13%)**	**103(31%)**	**77(23%)**	**44(13%)**	**70(21)%**	**338(100%)**

Table 4.28, out of 338 respondents a total of 249 (74%) noted that construction cost influence financing of BOT projects, with 75 (30%) noted it is very high, 67 (27%) at high level, 57 (23%) at moderate level, 40 (16%) at low level and 30 (12%) at very low level. A total of 89 (26%) responded that there is no influence. Out of which 15 (17%) indicated that the influence is not there at very high level, 17 (19%) indicated that there is no influence at high level, 20 (23%) noted that the influence is not there at moderate level, 23 (26%) indicated that there is no influence at low level while 14 (16%) noted that the influence is not there at a very low level. The overall result reveals that 249 (74%) responded that cost may influence financing of BOT projects as contractors may not be able to finance the construction, 89 (26%) responded that it does not influence financing BOT projects. Construction cost has a high influence on BOT projects financing as the costs determine the return on investment which influences the decision on whether to finance or not of BOT projects.

The implication is that when construction cost increases by shilling, financing BOT projects reduces by 1.7 (1+74/100) times.

4.5.2 Operation Costs and financing BOT projects

The study was interested in establishing operation costs influence as a component of financial factors influence in financing of BOT projects. Operation costs tend to increase with prolonged construction periods, inflation that raises the cost of materials and operations of the concession. The respondents were asked on their view of the operation costs and its influence on financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results were as depicted in table 4.29;

Table 4.29: Operation costs' influence on financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	84	24.9
Low	98	29.0
Moderate	42	12.4
High	51	15.1
Very high	63	18.6
Total	**338**	**100.0**

Table 4.29 depicts that 98 (29.0%) among the respondents declined the influence of operation costs is low, 84 (24.9%) very low, while 63 (18.6%) agreed that operation costs influence financing of BOT at very high level followed by 51 (15.1%) at high level, whereas 42 (12.4%) responded that operation costs moderately influenced financing of BOT projects. This means that operating cost was not found to have a significant relationship with financing BOT projects. Therefore implies that

when operation cost increases by one shilling financing BOT projects may not decrease proportionately, also worth noting is that there is likelihood 1.2 times operating cost not influencing BOT projects when holding other factors constant. The findings supports the study done by Shapiro (2010) in Illinois Chicago who argued that the operations cost must be lower than the return on investment to attract funding.

In presenting the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are as shown in table 4.30;

Table 4.30: Cross tabulation showing operation cost's influence on financing Build Operate Transfer projects

Financing of BOT projects	Rating the concessionaires' dependency on contractors in meeting construction costs					Total
	Very low	Low	Moderate	High	Very high	
Influence	30(12%)	78(32%)	55(22%)	26(11%)	55(22%)	**244(72%)**
Does not influence	14(15%)	25(27%)	22(23%)	8(19%)	15(16%)	**94(28%)**
Total	**44(13%)**	**103(31)%**	**77(23%)**	**44(13%)**	**70(21%)**	**338(100%)**

Table 4.30, indicates that the influence of dependency on contractors in meeting construction costs to financing of BOT exists with 244 (72%) of the respondents supporting that there is an influence. Out of the total who indicated that there is an influence, 55 (22%) noted it is a very high level, 26 (11%) high level, 55 (22%) moderate level, 78 (32%) at low level and 30 (12%) at very low level. A total of 94 (28%) responded that there is no influence. Out of which 15 (16%) indicated

that the influence is not there at very high level, 8 (19%) indicated that there is no influence at high level, 22 (23%) noted that the influence is not there at moderate level, 25 (27%) indicated that there is no influence at low level while 14 (15%) indicated that the influence is not there at a very low level. This implies that when operating cost increases by 1 shilling BOT projects are not affected up to 1.2 times.

The total respondents who noted that there was influence is 244 (72%), therefore looking at the influence within it means that operation cost has an influence on financing BOT projects. This means when operation cost increases by 1 shilling financing BOT project may reduce up to 1.7 times the number of increase in operation cost. These could be attributed to the contractors either utilizing the concede assets therefore not incurring any major cost at the initial stages of operating the project. This means that as the period lapses assets are depleted and investor starts to incur more costs. This finding confirms the study done by De Menza and Webb (1987) in USA which revealed that the resulting level of investment will be socially suboptimal. In the first−best equilibrium with risk neutral investors, all projects with expected returns equal to the world rate of return will be undertaken.

4.5.3 Project termination by the concessionaires and financing BOT.

The study was interested in establishing Project termination by the concessionaires and financing BOT. While a project may be terminated, it does not necessarily mean that the project is a failure. However, many reasons for termination may be determined on how successful (or unsuccessful) the project has been up to that given time. Therefore the respondents were asked to state their opinions on the level of influence of Project termination by the concessionaires on financing BOT as measured in the scale of very low, low, moderate, high and very high levels and the results are as indicated in table 4.31.

149

Table 4.31: Project termination by the concessionaires and financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	89	26.3
Low	65	19.2
Moderate	64	18.9
High	64	18.9
Very high	56	16.6
Total	**338**	**100.0**

Table 4.31 reveals that 89 (26.3%) of the respondents responded that termination by the concessionaires influences financing of BOT projects at a very low level, followed by 65 (19.2%) at low level, 64 (18.9%) at moderate level, 64 (18.9%) at high level and 56 (16.6%). This means that concessionaries cannot terminate the contract before the end of the concessional period. The result implies that there is 1.3(1+26/100) chance of concession contract not being terminated. This can be attributing to the reason that the concessional contracts have fixed term with which the contract cannot came to the end before the end of the period. With the dismal performance of the concession raised the question of the need to investigate further the relationship within the variables.

To establish the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study further conducted across tabulation and the results are depicted in table 4.32.

Table 4.32: Cross tabulation showing the rate of project termination by the concessionaires

Financing of BOT Projects	Rating of the rail project termination by the concessionaires					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	67(27%)	49(20%)	54(22%)	43(17%)	37(15%)	**250(74%)**
Does not influence	22(25%)	16(18%)	10(11.2%)	21(24)%	20(23%)	**88(26%)**
Total	**89(26%)**	**65(19%)**	**64(18.9%)**	**64(18.9%)**	**56(17%)**	**338(100%)**

Table 4.32, depicts that the influence of project termination is high to financing of BOT with 37 (15%) indicating the influence is very high, 43 (17%) indicating that the influence is high, 54 (22%) indicating that the influence is moderate, 49 (20%) responded that the influence is low and 67 (27%) indicating that the influence is very low. Overall 250 (74%) of the respondents responded that the influence exist. However, 88 (26%) of the respondents responded that there was no influence with 20 (23%) indicating that there is no influence at a very high level, 21 (24%) responded that there is no influence at a high level, 10 (11.2%) noted that the influence does not exist at moderate level, 16 (18%) responded that there is no influence at low level and 22 (25%) noted that there is no influence at a very low level. Comparing the total respondents who responded that there is an influence with those who said that there is no influence, the study has found out that the influence is so high. The results prompted a further test for the chi square.

A chi square test was conducted and gave a p-value of 0.009 indicating that there is significant relationship between rail project termination by the concessionaires and BOT financing because the value is less than 0.05 assumed

confidence level.This can be attributed to the existing policy on concessional contract, that bides the parties to the contract due to the reason that concessional contracts in Kenya has a 25 year of term and termination is protected by law. Therefore this finding confirms the argument of Alexandersson and Hulten (2009) in a study done in USA, that BOT projects may not be financed if the concessionaires are likely to terminate the contract at will.

4.5.4 Government default in facilitating BOT project operation.

Government may default in facilitating concessional contracts if the returns are not of any beneficial to the public default in facilitating BOT project operation. The respondents were asked on their opinions on the influence Government department's default in facilitating BOT project as measured in the scale of very low, low, moderate, high and very high levels and the results are as indicated in table 4.33

Table 4.33: Government department's default in facilitating the project operation

Scale of measurement	Frequency (f)	Percent (f)
Very low	84	24.9
Low	98	29.0
Moderate	42	12.4
High	51	15.1
Very high	63	18.6
Total	**338**	**100.0**

Table 4.33 depicts that 98 (29.0%) responded that government department's default in facilitating project operation influences financing of BOT projects at a low level, followed by 84 (24.9%) noted very low level, 63 (18.6%) very high-level, 51 (15.1%) noted high level and 42 (12.4%) among the respondents responded that the

government department's default influence was moderate. Therefore there is no likelihood of government department defaulting in facilitating financing of BOT project. The results implies that the government intention to have improved infrastructures make it facilitate financing of BOT projects by giving necessary support and therefore the likelihood of the government supporting or not defaulting is 1.3 times (1+29/100). From the finding it would be simply wrong to state with confidence that government may not default just by looking at the percentages. This finding confirms the study done by IMF (2004) that good governance matters a lot in financing of BOT. According to IMF (2004) the government need to put in place enabling environment, right institutions, procedures and sound processes.

To present the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are shown in table 4.34.

Table 4.34: Cross tabulation showing government department's default in facilitating and financing BOT project

Financing BOT Projects	Government department's default in facilitating the rail project operation					
	Very low	Low	Moderate	High	Very high	Total
Influence	44(17.7%)	67(26.9%)	25(10%)	29(11.6%)	84(33.7%)	**259(76.6%)**
Does Not Influence	20(22.5%)	20(22.5%)	9(10%)	9(10%)	20(22.5%)	**79(23.4%)**
Total	**69(20.4%)**	**87(25.7%)**	**34(10%)**	**38(12.4%)**	**104(31%)**	**338(100%)**

Table 4.34, show that 84 (33.7%) respondents responded that the influence was very high, followed by 67 (26.6%) noted low level, 44 (17.7%) noted very low

level, 29 (11.6%) at a high level and 25 (10%) at moderate level. Whereas 20 (22.5%) respondents responded that government will not default in financing BOT projects at a very low level, 20 (22.5%) noted low and that it does not influence, 20 (22.5%) responded that it does not influence financing of BOT at a very high level followed by 9 (10%) who also consented that the influence does not exist at high level and 9 (10%) respondents noted the chances of government defaulting financing BOT projects is at a moderate level. Therefore there is no indication that the government can default in facilitating financing of BOT projects during the contractual period.

A total of 259 (76.6%) respondents supported that there is an influence compared to only 79 (23.4%) who responded that there is no influence. The result prompted further investigation of which a Chi- square test was conducted and the p value is 0.0188 that is below 0.05 assumed confidence levels. Therefore government may default in facilitating rail projects as shown by 76.6% within the levels of influence.

This implies that the largest difference in the column percentages for survey respondents in the category of government's default in financing BOT projects when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of very high influence which was 33.7% Therefore there a likelihood of 1.8(1+76.6/100) times government defaulting in financing of BOT projects. This is attributed to the fact that the government has developed interest on the standard gauge railway as stated by the respondents. The findings are supports the study done by IMF (2004) on good governance in the third world countries and found that the government need to put in place enabling environment right institutions, procedures and sound processes.

4.5.5 Availability of technological expertise in the maintenance and financing BOT projects.

The study was interested in establishing availability of technological expertise in the maintenance and financing BOT projects. Technological expertise help in the development of the project very fast and sometime lack of expertise leads to project delays. The respondents were asked to state their opinions on the influence availability of technological expertise in the maintenance and financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results are as indicated in table 4.35.

Table 4.35: Availability of technological expertise in the maintenance and financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	97	28.7
Low	69	20.4
Moderate	65	19.2
High	63	18.6
Very high	44	13.0
Total	**338**	**100.0**

Table 4.35 depicts that 97 (28.7%) responded that availability of technological expertise influences financing of BOT projects at a very low level, followed by 69 (20.4%) at low level, 65 (19.2%) at moderate level, 63 (18.6%) at high-level and 44 (13.0 %) among the respondents responded that availability of technological expertise influence was very high. Looking at the percentages we can deduce that the there was no availability of technological expertise among the concessionaire and this could probably have influenced financing of BOT projects. This implies that there was 1.3

155

(1+28.7/100) times of the projects not being funded due to lack of technological expertise and maintenances of BOT project. Delmon (2008) noted that in Project Finance, while the liability of project sponsors is usually limited to the level of their shareholdings, lenders will seek limited recourse to the assets of the shareholders in certain specified situations, up to a limited maximum amount and over a limited period and depends mostly on the concessional experts.

To establish the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions

The study conducted across tabulation and the results shown in table 4.36

Table 4.36: Cross tabulation showing availability of technological expertise in the maintenance and financing BOT projects

BOT Financing Projects	Rating of the availability of technological expertise in the maintenance of the rail project					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	75(30.1%)	54(21.7%)	52(20.9%)	44(17.7%)	24(9.6%)	**249(73%)**
Does not influence	22(25%)	15(17%)	13(15%)	19(21.3%)	20(23%)	**89(27%)**
Total	**97(28.7%)**	**69(20.4%)**	**65(19.2%)**	**63(18.6%)**	**44(13.0%)**	**338(100%)**

Table 4.36, depicts that 75 (30.0%) respondents responded that the influence was very low, followed by 54 (21.7%) at a low level, 44 (17.7%) at a high level. 52 (20.9%) at a moderate level, and 24 (9.6%) noted very high level. 22 (25%) respondents responded that availability of technological expertise in maintenance of the project does not influence BOT financing at a very low level, 20 (21%) noted that it does influence at very high level, 19 (21.3%) said that it does not influence

financing of BOT high level, followed by 15 (17%) who responded that the influence does not exist at low level and lastly 13 (15%) respondents responded that the availability of technological expertise in management does not influence at a moderate level. Result reveals that there is a relationship between availability of technology expertise and financing BOT with the overall total of 249 (73%) noting that there is an influence compared to 89 (27%) who responded that there is no influence between availability of technology and financing of BOT projects.

The result prompted need to investigate further and a chi -square test was also done and the result indicates that there is significant influence between the two variables because, it gave a p-value of 0.02 which is less than 0.05 assumed confidence interval. This indicates that the largest difference in the column percentages for survey respondents in the category of availability of technological expertise in management of the project when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of low influence which was 30.1%.Therefore, lack of technological expertise influence financing BOT projects, This implies that there is a likelihood of 1.3 times lack of technological expertise on the government side but the absence of technological expertise does not influencing financing of BOT projects by looking at the percentage.

The total influence within the variables indicates that 73% of the respondents agreed that that the influence will lead to not financing BOT projects. Only 27 responded that the influence may not .This can be attributed to rapid development of knowledge and information technology (IT), business environments have become much more complicated. In order to cope with ensuing complications, enterprises ought to be innovate; otherwise, it will be very difficult for them to survive in the marketplace. Hence, many enterprises have applied IT in order to cut production

157

costs, introduce innovations in products and services, promote growth, develop alliances, lock in customers and suppliers, and create switching costs and raise barriers to entry. Without knowledge of technology concessions would not perform well. The findings supports a study done by Rasmusen (2001) in USA that financing of BOT also relies on the expertise that available in the project. Because the right expertise determine the completion rate of the project thereby returns on investment is assured.

4.5.6 Concessionaire's expertise in adapting to changing requirements for project management and financing BOT projects

The study was interested in establishing Concessionaire's expertise in adapting to changing requirements for project management and financing BOT projects. Project construction takes every long period and as a result, many changes do arise within the project its self-.therefore expertise by the concessionaire in management of these chances is key to project success. The respondents were asked their opinions on the influence **o**f Concessionaire's expertise in adapting to changing requirements for project management and financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results are as indicated in table 4.37;

Table 4.37: Concessionaire's expertise in adapting to changing requirements for project management and financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	94	27.8
Low	90	26.6
Moderate	54	16.0
High	55	16.3
Very high	45	13.3
Total	**338**	**100.0**

Table 4.37 depicts that 94 (27.8%) responded that availability of concessionaire's expertise influences financing of BOT projects at a very low level, followed by 90 (26.6%) at low level, 54 (16.3%) at high level, 55 (16.0%) at moderate level and 45 (13.3%) among the respondents responded that concessionaire's expertise influence was very high. Therefore concessionaire's expertise in adopting to change has no influence in financing BOT. Its implication is that when concessionaires do not have enough expertise in adopting to change they can still source form outside. Therefore their performance is not limited by the number available. The findings support a study done by Jack *et al.,* (2010) who argued that an organisations capability to adapt to the changes and challenges in operations may attract funding for BOT projects.

To present the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions the study conducted across tabulation and the results are shown in table 4.38;

Table 4.38: Cross tabulation on concessionaire's expertise in adapting to changing requirements for project management and financing BOT

BOT Financing Projects	Rating the concessionaires expertise in adapting to changing requirements for project management					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	69(27.7%)	71(28.5%)	45(18.1%)	35(14.1%)	29(11.6%)	**246(72%)**
Does not influence	25(28.1%)	19(21.3%)	9(10%)	20(23%)	16(18%)	**91(38%)**
Total	**94(27.8%)**	**90(26.6%)**	**54(16%)**	**55(16.3%)**	**45(13.3%)**	**338(100%)**

Table 4.38, depicts that 69 (27.7%) respondents responded that the influence was very low, followed by 71 (28.5) % at a low level, 45 (18.1%) at moderate level, 35 (14.1%) at a high level and 29 (11.6%) at very high level. The finding show that consortium did not have enough expertise in running the concession and hence they did not adopt to change within the external and internal environment. This implies that the largest difference in the column percentages for survey respondents in the category of concessionaire's expertise in adapting to changing requirements for financing BOT projects when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of high influence supported by the total of 246 (72%) although looking through the influence is not very high compared to those who indicated that there is no influence at 91 (38%).

Therefore, there is likelihood of 1.7(1+72/100) times chances of concessionaire experts not adopting to change. This implies that lack of adopting to change influences financing of BOT projects. This may be as a result of absorption of employees from ERC as early attested by the respondents in table 4.2. The findings supports a study done by Jack (2010) who argued that an ever changing hyper-competitive business world full of challenges, it has never been more important for

organizations to be able to not only overcome these challenges but also be able to adapt and take advantage of them. He argued that there are a plethora of macro-economic forces spanning from the increasingly competitive global marketplace to technological innovations that have significantly accelerated.

Hypothesis 3: There is significant relationship between perceived financial factors' influence and financing BOT projects in Kenya

This was the third hypothesis of the study where the following null hypothesis to choose between two competing hypotheses about the value of population parameters within financial factors and how they related to financing of BOT projects were tested;

There is no significant relationship between perceived construction costs and financing of the BOT railway project in Kenya.

	Chi-square		
		Df	p-Value
Pearson Chi-Square	5.840[a]	4	.021
Likelihood Ratio	5.127	4	.030
Linear-by-Linear Association	4.043	1	.081

When the chi square test was calculated it gave a p-value of 0.021. Therefore, the null hypothesis was rejected. This means that there is significant relationship between construction costs and financing of BOT projects in Kenya. Therefore construction cost influence finance of BOT projects. Results from the chi-square test were strange compared to the results of cross tabulation, confirming the finding of Alexandersson and Hulten (2009), Van Herper, (2002) who states that combined sample analysis suggests that between 32% and 36% of the PFI projects experienced

variation-related cost escalation and failed to provide price certainty to the public sector The study supports (Bain) findings that, for 29 projects out of 107 (27%), construction contractors faced increased costs, although, these cost increases were not of any influence.

Therefore the study tested the following null hypothesis to choose between two competing hypotheses about the value of a population parameter;

There is no significant relationship between perceived operation costs and the financing of the BOT railway project in Kenya.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.836[a]	4	.0145
Likelihood Ratio	6.621	4	.0157
Linear-by-Linear Association	.248	1	.0619
N of Valid Cases	338		

When chi square test was performed a p value of 0.0145 was obtained indicating that there is a significant influence between operation cost and financing of BOT projects because the p-value is less than the assumed confidence interval of 0.05. Therefore the null hypothesis is rejected. Meaning operation cost influence financing of BOT projects. Also confirmed is the likelihood figure that is almost similar to the p-value of the Pearson chi-test. These results could be attributed to the answers given by the respondents who stated that more expenses were incurred during the operation of the projects, as old train engines were frequently breaking down and needed to be repaired. The chi- test confirms the findings of the study done by Alexandersson and Hulten (2009) in USA which revealed that BOT project can create

a high degree of assurance to the public sector that the project goals are reached and line up with the price and subsidies agreed upon at the time of signing the contract. This reduces the possibility for large unexpected cost increases, which facilitates the long-term planning of the public sector during the operation of the project.

The P-value of components within financial factors are less than the significant level (0.05) thus indicating that construction costs has a significance value of 0.021, followed by the operation costs with a significance value of 0.0145. This observed test statistics are in the critical region and therefore the null hypothesis was rejected and the study concludes that there is significant relationship between perceived financial factors influence and financing BOT projects.

Due to variations in influence of each indicator in terms of percentages and percentages within the variable the study conducted a Wald test to establish the statistical significance of the most influencing indicators within the financial factors The results are as shown in table 4.39;

Table 4.39: Wald test showing comparative power functions of variables within financial factors influence on financing BOT projects.

		B	S.E.	Wald	Df	Sig.	Exp(B)
				Variables in the equation			
	Cash	-.147	.124	1.419	1	.023	.863
	Construc	-.015	.129	.014	1	.012	.985
	Terminat	.263	.117	5.074	1	.024	1.300
Step 1(a)	**Gdefault**	-.214	.129	2.780	1	.010	.807
	Techmain	.110	.134	.674	1	.041	1.116
	Expertis	.152	.140	1.185	1	.028	1.164
	Constant	**-.975**	**.310**	**9.875**	**1**	**.002**	**.377**

Variable(s) entered on step 1: Cash, Construc, Terminat, Gdefault, Techmain, and Expertis.

From the result depicted on Table 4.39 the value of the Wald test statistic for coefficient corresponding to the variables cash is 1.419 and an p-value of 0.023, contract termination by government 0.014 and p-value of 0.012, termination of contract by concessionaires Wald of 5.074 and p-value of 0.024, Government default with a Wald test of 2.780 and p-value of 0.10, technology maintenance of Wald of 0.674 with a p-value of 0.041 and expertise in the concession of a Wald test 1.185 and a p-value of 0.027.The results show that termination of contract by concessionaires as a predictor, has the most power in terms of influence. Wald test statistic decree to zero as the distance between the parameter estimate and the null value increases. This is followed by technological expertly with a Wald of 0.014 and a significance of 0.012, then concessionaire experts with a Wald of 1.185 and a significance of 0.028 and the availability of cash with a Wald figure of 1.419 and a significance of 0.028 and the

last in terms of power of influence is government default with a Wald of 2.674 and 0.010.

This implies that termination of the concessions by the concessionaires is the most influencing predictor among the variables. This can be attributing to the fact that concessional contracts are long term contracts and with the many years it takes to complete the contract risk may occur that may increase the cost overrun therefore extending the period that finally may lead to concession none performances hence liquidation and finally termination. This finding adds new knowledge. According to Gupta (2005) the idea is to choose a sufficiently long extension period to induce the firm to provide high quality is the minimum length, any value of the extension length between the minimum length and the maximum will work. This is because the efficient quality also maximizes the firm's operating profits in each period Thus, extending the license period will not induce the firm to increase the quality level because that would only increase its investment cost without extra benefit

4.6 Environmental factors and financing of BOT projects

This was the fourth objective the study sought to achieve with a focus in environmental policies, laws and policies on environment protection, force majeure risks and public opinion to assess how these variables influence financing of BOT projects. These are further discussed on the following subsequent sub-themes;

4.6.1 Environmental Policies and financing of BOT projects

The study was interested in establishing environmental policies' influence as a component of environmental factors influence financing of BOT projects. Environmental policy evaluation on project's potential environmental risks in its area of influence; examines project alternatives; identifies ways of improving project

selection, sitting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation. The respondents were asked on their opinion regarding environmental policies perceived influence and financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results are as shown in table 4.40

Table 4.40: Distribution of level of response on environmental policies and financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	41	12.1
Low	98	29.0
Moderate	86	25.4
High	80	23.7
Very high	33	9.8
Total	**338**	**100.0**

Table 4.40 indicates that 98 (29.0%) respondents responded that environmental policies influence financing of BOT at a low level, followed by 86 (25.4%) moderately, 80 (23.7%) high, 41 (12.1%) very low and 33 (9.8%) responded that it was very high. therefore environmental policies does not influence financing BOT. As shown by 29%. The implication of this result is that the availability of environmental policy may not influence financing of BOT projects by 1.3 times (1+29.0/100) either way. To depict the relationship between two or more survey

166

questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions. The study conducted across tabulation and the results are as indicated in table 4.41.

Table 4.41: Cross tabulation showing environmental policies' influence on financing Build Operate Transfer projects

BOT Projects financing	Rating of policies formulation in integrating environmental and social consideration in rail construction projects					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	31(12.4%)	71(28.5%)	71(28.5%)	57(22.9%)	19(7.6%)	**249(74%)**
Does not influence	10(11.2%)	27(30.3%)	15(16.9%)	23(25.8%)	14(15.7%)	**89(26%)**
Total	**41(12.1%)**	**98(29%)**	**86(25.4%)**	**80(23.7%)**	**33(9.8%)**	**338(100%)**

Table 4.41 illustrates that 71 (28.5%) respondents agreed that environmental policies' influence at a low level while 10 (11.2%) in the same category declined its influence, followed by 71 (28.5%) who moderately agreed on the influence of environmental factors while in the same category 15 (16.9%) declined its influence, this was followed by 57 (22.9%) respondents who acknowledged its influence at a high level while 23 (16.9%) in the same group declined its influence followed by 31 (12.4%) agreed that the influence of environmental policies was at a very low level while in the same category 10 (11.2%) declined, lastly 19 (7.6%) respondents noted that environmental policies influence financing of BOT projects at a very high level where as in the same group 14 (15.7%) declined its influence.

The result indicates that environmental policies have an influence on financing of BOT projects as supported by 249 (74%) of the respondents compared to 89 (26%) who indicated that there is no influence. This implies that the largest difference in the column percentages for survey respondents in the category of government's

environmental policy formulation and financing BOT projects when compared across the groups defines by levels (very low, low, moderate, high and very high) was that of low influence which was 28.5% thus environmental policy do not influence financing of BOT projects. Therefore there is a likelihood of environmental polices influencing financing of BOT projects. Looking at the influence within each variable one may agree that there is no sufficient influence, but by looking at the total influence which is 74% indicates that there is sufficient evidence to agree that policy formulation influence financing of BOT projects.

According to U.S. Department of Transportation (2010), Results from environmental research and pursuant governmental regulations are changing the way companies do business and how transportation systems address the future. According to the report for the Pew Centre on Global Climate Change mentioned, trucking accounts for 72 percent of "transportation energy and use and carbon emissions effects on the environment, as these policies are implemented little room is left for manipulation and therefore all rules are followed make environmental policies less significant.

The findings supports a study by Topalovic *et al.,* (2012) that explored the health, environmental, social and economic impacts of light rail transit, and a component of the City of Hamilton's rapid transit initiative in America. It performs a comparative analysis with other major North American cities that have successfully implemented this form of mass transit. The analysis concentrates on three main areas: urban development and land values, health and environmental impact and socioeconomic factors. The results of the research on light rail transit (LRT) and its possible benefits indicate overwhelming support for the economic, health, environmental and social benefits of LRT, especially when compared to other forms

168

of transit, including rapid bus and local transit schemes. This could be the reason why policies are formulated and project is left to operate within the environment without being monitor, they may exploit the value of environment for its own profit maximization. The overall 74% shows that there is a significant relationship between environmental policy and financing BOT project, While 26% indicated that financing BOT is not influenced by environmental policies.

4.6.2: Laws and policies on environment protection and financing BOT projects

Governments create the rules and frameworks in which businesses are able to compete against each other. From time to time, the government will change these rules and frameworks forcing businesses to change the way they operate, thus affected the business. The respondents were asked to state their opinion on influence of law and policies and environment protection on financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results were as shown in table 4.42;

Table 4.42: Laws and policies on environment protection on financing Build Operate Transfer Projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	55	16.3
Low	107	31.7
Moderate	53	15.7
High	49	14.5
Very high	74	21.9
Total	**338**	**100.0**

Table 4.42 indicates that 107 (31.7%) respondents agreed that laws and policies on environmental protection influence financing of BOT at low level, followed by 74 (21.9%) at a very high level, 55 (16.3%) at a very low level, 53 (15.7%) at moderate and 49 (14.5%) at a high level of influence. The result reflects that law and environmental policies protection do not influence financing BOT projects. Results implies that when laws and policies on environment protection are available or not, financing BOT projects may not be influenced up to 1.3 times (1+31.7/100) therefore financing BOT does not depend on availability of laws and policies on environment.

The findings supports a policy National Environmental Policy Act of (1969) U.S. Department of Transportation's Federal Highway Administration (FHWA), environmental streamlining procedures have been implemented for federally-funded highway projects on an ad hoc basis for a number of years, even before the official introduction of the concept in TEA-21 in 1998. The procedures that have been utilized in advancing projects through the NEPA process have varied, to some extent, by former FHWA region or by FHWA divisional office, or even from project to project. However, even on an ad hoc basis, the FHWA projects that have been most successful in advancing through the entire NEPA process in a timely fashion can be particularly informative and useful for future instruction and application on other projects, therefore policies and laws need not be available.

The findings prompted the need to determine the relationship within. The study further conducted a cross tabulation to establish the level of influence within each decision status on each scale items and the results obtained are as indicated in table 4.43.

To establish the relationship between two or more survey questions by providing a side-by-side comparison of how different groups of respondents answered the survey questions, the study conducted across tabulation and the result shown in table 4.43.

Table 4.43: Cross tabulation showing laws and policies on environments protection and financing BOT Projects

BOT Financing Projects	Rating of the laws and policies on environment protection relating to construction of the rail infrastructure projects					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	38(15.3%)	86(34.5%)	43(17.3%)	35(14.1%)	50(18.9%)	**252(76%)**
Does Not influence	17(19.1%)	21(23.6%)	10(11.2%)	14(15.7%)	34(30.3%)	**86(24%**
Total	**55(16.3%)**	**107(31.7%)**	**53(15.7%)**	**49(14.5%)**	**74(21.9%)**	**338(100%)**

Table 4.43 reveals that 86 (34.5%) of the respondents responded that influence of laws and policies on environment protection was low, 21 (23.6%) in the same group saw no influence of the same, 50 (18.9%) noted very high influence, in the same category 34 (30.3%) noted there is no influences, 38 (15.3%) in the very low category responded the influence is low, In the same category 17 (19.1%) noted no influence. Whereas 35 (14.1 %) in the high-level category acknowledged the influence, while at the same category, 14 (15.7%) respondents noted there is no influence on financing BOT projects. This means that laws and policies on environment protection influence financing BOT projects as supported by 252 (76%) compared to 86 (24%) of the total respondents who noted no influence. The implication is that when environmental policies and laws are available on not chances of financing BOT projects remains at 1.8 times (1+76/100) compared to 1.2 time of not financing.

A chi square test was done to investigate further the level of each influence and it gave a p- value of 0.01 which is less than 0.05 confidence level. Therefore there is sufficient evidence that environmental laws influence financing of BOT projects. This finding agree with the findings by Glazebrook *et al..* (2000) that the growing interest in 'sustainable development' has led many companies to examine the ways in which they deal with environmental issues. To achieve sustainable development, environmentally conscious design (eco-design) or Design for Environment (DfE) is becoming an increasingly important policy (Brezet and Van Hemel 1997). According to Khan *et al.,* (2002) policy is one of the most important techniques for the successful implementation of a process or development in the context of environmental sustainability. As Allen (1996) indicated, one of the most common uses of policy is identifying critical areas in which the environmental performance of the infrastructure can be improved

4.6.3: Occurrence of force majeure risks and financing BOT projects

Certain events, beyond the control of the parties, may inhibit the parties from fulfilling their duties and obligations under the project agreements. To avoid the resultant breach of contract, parties may prefer to excuse contractual obligations to the extent that they have been so inhibited. Respondents were asked whether force majeure risks influence financing of BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the results were as shown in table 4.44;

Table 4.44: Force majeure risks and financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	46	13.6
Low	93	27.5
Moderate	65	19.2
High	51	15.1
Very high	83	24.6
Total	**338**	**100.0**

Table 4.44 reveals that 93 (27.5%) respondents responded that the influence of force majeure is low, 83 (24.6%) very high, 65 (19.2%) responded it was moderately projects, 51 (15.1%) responded it was high and 46 (13.6%) responded that force majeure risks influence financing of BOT projects was very low. This means that force majeure does not influence financing BOT project. This implies that when force majeure risk occurs during the project operation financing BOT projects is not affected. This could be attributed to government compensating risk that occurred during the post-election violence as indicated by the general manager of the consortium during the interview. On the other hand the 83 (24.6%) indicate high which is also significant ,meaning that if force majeure risk occurs at level to which compensation may not be made by the government then financiers may not fund the projects up to 1.3 times.

Looking at the result in table 4.44 it is true to state that the influence is low, while the percentage of high also seem to be significant the study therefore conducted across tabulation to establish the percentage within tabulation and the results were as in table 4.45:

Table 4.45: Cross tabulation showing the influence of force majeure risks on financing BOT projects

Financing BOT Projects	Rating of the likely occurrence of force majeure risks during construction and operation of the rail project					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	33(13.1%)	61(24.2%)	54(21.4%)	48(19.0%)	56(22.2%)	**252(74%)**
Does Not Influence	8(9.3%)	25(29.1%)	11(12.8%)	12(14%)	30(34.9%)	**86(26%)**
Total	**41(12.1%)**	**86(25.4%)**	**65(19.2%)**	**60 (17.8%)**	**86(25.4%)**	**338(100%)**

Table 4.45 show that 61 (24.2%) responded the influence was low, 25 (29.1) declined within the same category of low, 54 (21.4%) indicated that there is an influence at moderate level, 11 (12.8%) in the same category refuted, 56 (22.2%) noted very high, while in the same category 30 (34.9%) declined, 48 (19%) indicated that there is an influence at High level, while in the same category 12 (14%) did not agree and 33 (13.1%) very low whereas 8 (9.3%) in the same category did not acknowledge its influence. Therefore majeure risks occurrences influence financing of BOT projects as supported by 252 (74%) of the respondents compared to 86 (26%) of the respondents who indicated that there is no influence.

The study further carried out a chi- square test which gave a p value of 0.046, which still less than the confidence level of 0.05 indicating that there is significance influence between the two variables. We deduce that when force majeure risks occur during the concession contract BOT project has a chance of being financed 1.2 times (1+17/100). This can be attributed to the response the government made during post election violence, of which the damage of the railway was paid by the government of Kenya. The study finding supports the results of a study done by Xenidis & Angelides

(2005) where findings indicated that force *majeure* usually includes unexpected circumstances that occur beyond the control of a project stakeholder and prevent the stakeholder from fulfilling his obligations incorporated in the contract. These "unexpected circumstances" should be limited only to events that are impossible to foresee at the point of signing the contract (e.g., sudden and severe natural phenomena), excluding rare events, where their occurrence is predictable (e.g. public disorder).

4.6.4 Public's Opinion and financing BOT projects

Public opposition if environmental or social impacts are questionable. Large infrastructure projects affect both the environment and the social life of the region where they are established. In many cases, the public strongly disbelieves that a new infrastructure project will not harm the environment, public health and safety of the region where it is established (rail). This is the reason why social groups often oppose the development of large projects, considered to be detrimental to living standards. This public opposition can delay construction and cause operation problems in a BOT project, with direct effect to viability and profitability of the project. Respondents were asked to explain the level of influence of Public opinion on financing BOT projects and the results were as shown in table 4.46: The scale of measurement were very high (5), high (4), moderate (3), low (2) and very low (1).

Table 4.46: Publics opinion and financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	92	27.2
Low	92	27.2
Moderate	44	13.0
High	50	14.8
Very high	60	17.8
Total	**338**	**100.0**

Table 4.46 indicates that 92 (27.2%) respondents responded that the influence was low and low respectively followed by 60 (17.8%) very high 50 (14.8%) high and 44 (13.0%) moderate. This means that public opinion does not influence financing BOT projects. The implication is that when the opinion chances towards negative financing BOT project chances 1.2 (1+17/100) compared to 1.3(1+27/100) times of not being financed. Therefore the variation cannot be deduced to be directional. Therefore there was need for further investigation, to shows the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions and the results obtained presented as in table 4.47;

Table 4.47: Cross tabulation showing the influence of public's opinion on financing BOT projects

BOT Financing	Rating of the public's opinion on the concessional performance on the achievement of the rail project					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	62(24.1%)	66(25.7%)	33(12.8%)	29(11.3%)	67(26.1%)	**257(76%)**
Does Not influence	23(28.4%)	18(22.2%)	5(6.2%)	15(18.5%)	20(24.7%)	**81(24%)**
Total	**85(25.1%)**	**84(24.9%)**	**38(11.2%)**	**44(13.0%)**	**87(25.7%)**	**338(100%)**

Table 4.47 indicates that 62 (24.1%) of the respondents responded that the influence was very low, in the same categories 23 (28.4%) indicated that the influence does not exist, 66 (25.7%) responded it was low, while 18 (22.2%) in the same category denied that there is no influence, 29 (11.3%)indicated that there is high influence, while 15 (18.5%) in the same group declined, those who indicated that there was very high influence were 67 (26.1%),while in the same category 20 (24.7%) responded it does not influence, 33 (12.8%) responded that public's influence was moderate, while 5 (6.2%) in the same category responded it did not. The table also indicates that the total majority 257 (76%) responded that public opinion influence financing BOT projects compared to only 81 (24%) who responded that there is no influence. The implication of these results is that when public opinion is negative or positive towards the project the chances of financing BOT projects is 1.8 (1+76/100) higher and 1.2 chances lower. Using the frequency of each category (very low, low, moderate, high and very high to compare the likelihood of a specific answer can be misleading.

For further investigation a chi -square test was calculated and gave a p value of 0.023 which is below the significance level of 0.05 indicating that public opinion

influence financing BOT projects. These results supports the findings of Chan and Tse (2003) who illustrated that cultural difference can do a substantial damage to the organization of an international construction project. In their research on contractual issues of such projects, they clearly suggest the demand for an integrative investigation of legal, social, and cultural contexts that may cause specific risks to the development of international projects. Therefore, such contexts must be considered thoroughly to individuals involved trust and the general public, in order to ensure close and fruitful collaboration with local staff and labour and to avoid public opposition in environmental or social issues. With these variation in the findings there was need to establish the comparative power function of each variable within environmental factors. These variances prompted the study to test the following null hypothesis to choose between two competing hypotheses about the value of a population parameter;

Hypothesis 4: The environmental policies have no significant influence on the financing of the BOT railway projects in Kenya

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.305[a]	4	.008
Likelihood Ratio	7.880	4	.096
Linear-by-Linear Association	2.369	1	.124
No. of Valid Cases	**338**		

The chi square test was carried out, gave a p - value of 0.008 which is below confidence interval of 0.05. Therefore, the null hypothesis is rejected. Meaning that there is significant relationship between environmental policies and financing of BOT projects in Kenya.

Therefore a Wald test was performed and the results are as show in table 4.48

Table 4.48: Wald test showing comparative power functions of variables within Environmental factors influence on financing BOT projects

		Variables in the equation					
		B	**S.E.**	**Wald**	**Df**	**Sig.**	**Exp(B)**
	ENVITPOL	.045	.117	.144	1	.007	1.046
	LAWPOE	.145	.123	1.389	1	.024	1.156
Step 1(a)	**FORCEMAJ**	.049	.120	.165	1	.006	1.050
	OPINION	-.088	.105	.713	1	.039	.915
	Constant	-1.007	.334	9.071	1	.003	.365

Variable(s) entered on step 1: Envitpol, Lawpoe, Forcemaj, And Opinion.

Table 4.48 indicates the result of a Wald test on environmental factors indicators and their power of influence on financing BOT projects. Environmental policy has a Wald result 0.144 and a significance value of 0.007, laws and policies on environment has a Wald result of 1.389 and a significance of 0.024, force majeure risks has a Wald result of 0.165 and a significance 0.684 and public opinion has a Wald result of 0.713 and a significance of 0.039. This is therefore, among the indicators of the environmental factors environmental policy has stronger power of influence on financing BOT in comparison to the other indicators of environmental factors.

179

Wald test of the environmental policy statistics as shown in table 4.48 decreases to zero as the distance between the parameters estimate and the null value increases, implies that Wald test decrease to the significance. The findings supports Glazebrook *et al.,* (2000) who argued that growing interest in 'sustainable development' has led many companies to examine the ways in which they deal with environmental issues To achieve sustainable industry, environmentally conscious design(eco-design) or Design for Environment (DfE) is becoming an increasingly important topic (Brezet and Van Hemel 1997), hence need to have polices to protect the environment. This is followed by force majeure risk with a Wald test statistic results of 0.165 and significance of 0.006, which tends to decrease to zero as the distance between the parameter estimate and the null value increases.

Therefore the influence force majeure risk power is the second in influencing financing BOT projects, these result are contrary to the findings of the frequency distribution and the cross tabulation which indicated that the two do not have any significant influence in BOT financing. The finding are not in line with Xenidis & Angelides (2005) who indicated that force *majeure* usually includes unexpected circumstances that occur beyond the control of a project stakeholder and prevent the stakeholder from fulfilling his obligations incorporated in the contract. They proposed these "unexpected circumstances" should be limited only to events that are impossible to foresee at the point of signing the contract (e.g., sudden and severe natural phenomena), excluding rare events, where their occurrence is predictable (e.g. public disorder, therefore the study creates a new knowledge.

Public opinion and laws on environmental policies have no significant influence as the Wald test of 0.713 and 1.389 all tends to increase from zero as the distances between the parameter estimate and the null decreases. These results

180

confirm the results form frequency percentage and cross tabulation table. Which when we compare the % within respondents the public opinion, the level high influence become reverse and very low (17.5%). This finding is consistent with the results of former studies conducted by Qiao *et al.,* 2001, and Li *et al.,* 2005). Li *et al.,* (2005) revealed that social support is one of the critical success factors in public-private partnership (PPP) projects.

Social support is based on the public acceptance of the concept of private provision (Li *et al.,* 2005). Qiao *et al.,* (2001) found that politics has a close relationship with the development and implementation of public policy. A positive political attitude towards the private sector involved in an infrastructure project would support the growth of PPP. Li *et al.,* (2005) On the other hand, states that inadequate political support would pose a great risk to PPP projects. In Virginia when building the Dulles Greenway using the BOT method, most residents liked the project, but some opponents were very vocal. That public relations campaign had to be launched in the communities in the vicinity of the project in order to gain more cooperation from residents before the construction process. The study confirms the findings of Qiao *et al.,* (2001) done in Oregon and found public attitudes are strongly influenced by mistaken beliefs.

A 1994 survey on public opinion about crime and corrections in Oregon conducted by Doble Research Associates showed that citizens believed half of those convicted of violent crime are not incarcerated, and also that large numbers of both violent and non-violent prisoners are released early due to prison overcrowding. In stark contrast to these beliefs, data from the Oregon Criminal Justice Council shows that of all convicted offenders, violent and non-violent, 77% receive jail, while none are released early due to prison overcrowding (Li *et al.,* 2005)

4.7 Political and legal factors on financing BOT projects

This was the fifth objective the study sought to achieve with a focus on legal framework for realising BOT projects, out of control risk, termination of concessions, taxes and laws and governments experience in managing concessions and influence of other transport sector partners.

4.7.1 Political and legal factors and financing BOT projects

The state represents tax payers (public) who ought to receive a value of what they pay for and infrastructure in this case is particular in enhancing growth and development in terms of production and transport which in turn fuel economic growth of a country and must be decided politically therefore interfere with the distribution of the of infrastructure projects. The respondents were asked to state their opinion on how political and legal factors influencing financing BOT project as measured in the scale of very low, low, moderate, high and very high levels and the results are as presented in table 4.49;

Table 4.49: Termination of concessions by the government of Kenya on financing BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	103	30.5
Low	67	19.8
Moderate	53	15.7
High	66	19.5
Very high	49	14.5
Total	**338**	**100.0**

Table 4.49 depicts that 103 (30.5%) responded that concessional contracts termination by the government is very low, 67 (19.8%) responded was low, while 66 (19.5%) responded it was high, 53 (15.7%) responded it was moderate and 49 (14.5%) responded it was very high. Therefore government of Kenya may not terminate the concessional contract before the contract came to an end as shown by 30.5%. This can be attributed to the fact that concessional contracts have affixed duration and cannot be terminated before the end of the contract and if terminated liquidation must be made.

To establish the relationship between two or more survey questions by provide a side-by-side comparison of how different groups of respondents answered the survey conducted, data were across tabulated and the results are shown in table 4.50;

Table 4.50: Cross tabulation on termination of concessions by the government

BOT projects financing	Rating of the termination of concessions by the government of Kenya					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	65(25.3%)	44(17.1%)	32(12.5%)	39(15.2%)	77(30%)	**258(77%)**
Does not influence	20(24.7%)	15(18.5%)	9(11.1%)	19(23.5%)	18(22.2%)	**80(33%)**
Total	**85(25.1%)**	**59(17.5%)**	**41(12.1%)**	**58(17.2%)**	**95(28.1%)**	**338(100%)**

Table 4.50 reveals that 65 (25.3%) of the respondents responded that there was a very low influence of the government terminating concession contract while 20 (24.7%) responded that there is no influence at very low level, 44 (17.1%) responded that there was a low influence of the government termination concession contract on BOT financing. 15 (18.5%) responded it does not, 32 (12.8%) responded that

183

influence is at moderate level, 9 (11.1%) responded that the influence is at a high level, while 19 (23.5%) responded there was no influence at high level, 258 (77%) responded that there was a very high influence of the government termination concession contract on BOT financing, while 80 (33 %) responded that there was no influence of the government termination of concession contract on BOT projects financing. This implies that there is a likelihood of 1.7(1+11/100) time of Government not terminating the contract irrespective of the circumstances around the operation of the contract.

Therefore the study conducted a Chi- square test and it gave a p value of 0.0414 compared with the assumed significance level of 0.05.This therefore confirms that government may decide to terminate the contract if the concession under-perform. This is contrary to the result of a cross-tabulation on table 4.50 but supports the overall relation within the variables which is 77%. These could be attributed to the intention express by the government to enter into a contact with the Chinese government to construct the standard gauge railway line. The findings confirms the results of a study done by Balloch & Taylor (2001) which reveal that some risks are associated policy and institutions, the country risks must be manageable, there must be strong government support, stable legal framework, efficient administrative framework, fair and transparent bidding procedure, and the BOT transaction should be structured so as to be concluded within a reasonable time and at a reasonable cost. Therefore these areas must have been looked by the government of Kenya before signing the contract and that why respondent rated very low influence

4.7.2 Government's intentions to change taxes and laws during the concession

The permanent recession and losses of jobs caused by the high taxes cause a drop in government revenue, as economic production drops. If government then raises tax rates to recoup the lost revenue, production drops again, and the revenue drops even more. In addition to this, the increase in prices caused by the increased taxation prevents government spending from purchasing as much. The respondents were therefore asked to give their opinion on the influence of change in taxes during concession period as measured in the scale of very low, low, moderate, high and very high levels and the results are as shown in table 4.51;

Table 4.51: government's intentions to change taxes and laws during the concession period

Scale of measurement	Frequency (f)	Percent (%)
Very low	76	22.5
Low	72	21.3
Moderate	72	21.3
High	69	20.4
Very high	49	14.5
Total	**338**	**100.0**

Table 4.51 reveals that 76 (22.5%) of the respondents were of the opinion that government's intentions to change taxes and laws during the concession period was very low, 72 (21%) indicated low level, 72 (21.3%) noted that it was also moderate, 69 (20.4%) responded that it was high and 49 (14.5%) responded it was very high. The results reveal that the government cannot change tax during the concession

185

contract, this implies that there is a likelihood of 1.2 times (1+22/100) chances of financing BOT when taxes are changed compare to, 1.1 times on the higher side when not changed. This prompted further investigation as taxes are known to change with the income generated and as a result of share held. The findings confirms the results of a study done by Brealey and Myers (1996) who argued that government taxes affect any kind of funding for a project because taxes relates to return on investment.

To show the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions Data was cross tabulated the data and results are as in table 4.52;

Table 4.52: Cross tabulation showing government's intentions to change taxes and laws during the concession period? Cross tabulation

BOT projects financing	Rating of the governments intentions to change taxes and laws during the concession period					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	54(21.0%)	44(17.1%)	45(17.5%)	48(18.7%)	66(25.7%)	**260(77%)**
Does not influence	16(19.8%)	16(19.8%)	14(17.3%)	15(18.5%)	20(24.7%)	**78(23%)**
Total	**70(20.7%)**	**60(17.8%)**	**59(17.5%)**	**63(18.6%)**	**86(25.4%)**	**338(100%)**

Table 4.52 Indicates that there is an influence of governments intentions to change taxes and laws during the concession period has an influence on BOT financing with the majority 260 (77%) of the respondents supporting. Out of this 66 (25.7%) responded that the influence was at a very high level, 48 (18.7%) at high level, 45 (17.5%) at moderate level, 44 (17.1%) at low level and 54 (21%) at very low level. For those who responded that there is no influence were 78 (23%), out of which 20 (24.7%) responded that there is no influence at very high level, 15 (18.5%) at

moderate level, 14 (17.3%) at low level and 16 (19.8%) at very low level. The difference between the two levels high and low in terms of influence was not wide.

Therefore a Chi square test was carried out which gave a p value of 0.009 confirming that there is a significant influence between the two variables. Therefore government cannot change taxes during the concessional contract. This implies that if Government increased taxes by 1% financing BOT reducing by 1.8 times (1+77/100). These results dispute the findings on the 4.51, therefore this could be attributed to the fact that macroeconomic indices such as inflation and escalation rate are typically determined based on historical records as well as the contractually constrained boundary condition. The eight itemized costs: survey cost, design cost, construction cost, incidental cost, operation equipment cost, taxes and charges, operation reserves, and land expropriation cost must be at estimated at the initial stage of signing the contract. The findings confirms to the study of Jung *et al.,* (2001) in china who argued that funding of projects can also be affected by government tax plans.

4.7.3 Government's experience in management of concessional contracts and financing BOT

When it comes to project management, most organizations put their practices before their people. They place more emphasis on rational factors, the process itself, and less on emotional drivers that could lead to project excellence, like their employees' experience. The respondents were asked to state their opinion on government experience in management of concessions contracts as measured in the scale of very low, low, moderate, high and very high levels and the results are shown in table 4.53,

Table 4.53: Distribution of level of response on the government's experience in management of concessional contracts and financing

Scale of measurement	Frequency (f)	Percent (%)
Very low	80	23.7
Low	97	28.7
Moderate	56	16.6
High	58	17.2
Very high	47	13.9
Total	**338**	**100.0**

Table 4.53 illustrate that 97 (28.7%) of the respondents responded that government experience in management of the concessions was low, followed 80 (23.7%) who responded that government experience was very low, 58 (17.2%) responded the government experience in running concessional contracts was high, 56 (16.6%) of the respondents responded that government experience in management of concessional contract was moderate, and only 47 (13.9%) among the respondents who said that government experience in management of concessional contracts was very high. Using the frequency of each category to compare the likelihood, very low more respondent 97 (28.7%) said that government experience is very low; this means that government of Kenya has no experience in the management of concessional projects. The result implies that the concessional contract could not perform well because the government of Kenya had no experience in management of such contract. This could be attributed to lack of laws and policy on training and management of concessional contracts by the government officials. Also worth noting was employees were

absorbed from the former East Africa Rail cooperation which was already underperforming.

To present the relationship between two or more survey questions which provide a side-by-side comparison of how different groups of respondents answered the survey questions cross tabulation data was done and results are shown in table 4.54;

Table 4.54: cross tabulation showing government experience in management of concessional contracts? Cross tabulation

Financing BOT	Rating the government of Kenya's experience in management of concessional contracts					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	56(21.8%)	69(26.8%)	44(17.1%)	36(14.0%)	52(20.2%)	**257(76%)**
Dies not influence	17(21%)	19(23.5%)	9(11.1%)	14(17.3%)	22(27.2%)	**81(24%)**
Total	**73(21.6%)**	**88(26.0%)**	**53(15.7%)**	**50(14.8%)**	**74(21.9%)**	**338(100%)**

Table 4.54 Indicates that majority 257 (76%) of the respondents noted that there is an influence of government of Kenya's experience in management of concessional contracts on BOT financing. Out of this 52 (20.2%) responded that there is an influence at very high level, 36 (14%) at high level, 44 (17.1%) at moderate level, 69 (26.8%) at low level and 56 (21.8%) at very low level. For those who responded that there is no influence were very 81 (24%), out of which 23 (27.2%) responded that there is no influence at very high level, 9 (11.1%) at moderate level, 19 (23.5%) at low level and 17 (21%) at very low level.

The findings have confirmed that experience mechanisms, by which effects are created, seem to be different. While project failure brings about feelings of loss

189

and shame, a highly successful project creates a standard referent to which next work assignments or roles are compared (Feldman 2000). This happened despite the fact that the respondents had, no average, a long tenure in the organization and had fulfilled many functional and project assignments in the past. The finding also supports a study by Ashforth (2001) who argued that a person takes on a role identity if the temporary role offers valence, salience, and social validation.

Since the project work environment was highly gratifying and satisfying, the ex-role became the standard referent of the work environment to which the person wanted to return which may not have been a measure in this case due to dismal performance of the concession. This indicates how what we know about traditional temporary work assignments may not apply to an agile organizational context. As presented by the findings, a project work environment, by its very own unique characteristics, is very appealing (Turner at al. 2008). It does not carry the stigma, discussed by Ashforth (2001) of the passerby without any form of engagement. The adaptation of the forma EARC workers could have not contributed to the experience of managing tracts and not concessional contract.

4.7.4 Road transport stakeholders influence on operations of the BOT projects

Financial stakeholders, such as road transporter and materials suppliers, can use their influence and production to demand greater financial benefit. Contractors can negatively affect the project through time and cost overruns. When a special-interest group causes a delay, it can increase the cost of the project by adding the expense of legal proceedings. Political stakeholders can also use the project to ingratiate themselves to voting blocks and political donors. The respondents were asked to state their opinion on the influence on road transporters as stakes holders on

financing BOT projects as measured in the scale of very low, low, moderate, high and very high levels and the result are shown in table 4.57

Table 4.57: Road transport stakeholders influence on operations of the BOT projects

Scale of measurement	Frequency (f)	Percent (%)
Very low	28	8.3
Low	87	25.7
Moderate	49	14.5
High	71	21.0
Very high	103	30.5
Total	**338**	**100.0**

Table 4.57 reveals that 103 (30.5%) of the respondents responded that road transport stakeholders influence on financing of BOT project was very high, followed by 87 (25.7%) who responded that the influence was low, 71 (21.0%) responded that the influence was high 49 (14.5%) responded it was moderate, and 28 (8.3%) among the respondents responded it was very low. This implies that there is 1.2 time stakeholders within the road transport sector influence the operation of the consortium hence influencing financing of BOT projects. This could be attributed to the matatu owners; long distance tract owners and the buses owner have never appreciated the performances of the rift valley railway, because its success to them means no business.

To establish the relationship between two or more survey questions by provides a side-by-side comparison of how different groups of respondents answered the survey questions Data was cross tabulated the data and results shown in the table 4.58.

Table 4.58: Cross tabulation showing the influence of road transport stakeholders on the operations of the concession of the rift valley consortium

Financing of BOT	Rating of the influence of road transport stakeholders on the operations of the concession of the rift valley consortium					
	Very low	**Low**	**Moderate**	**High**	**Very high**	**Total**
Influence	21(8.2%)	57(22.3%)	32(12.5%)	50(19.5%)	96(37.5%)	**256(75%)**
Does Not influence	3(3.7%)	13(15.9%)	6(7.3%)	7(8.5%)	53(64.6%)	**82(25%)**
Total	**24(7.1%)**	**70(20.7%)**	**38(11.2%)**	**57(16.9%)**	**149(44.1%)**	**338(100%)**

Table 4.58 Indicates that 96 (37.5%) responded that there is an influence at very high level, 50 (19.5%) high level, 32 (12.5%) at moderate level, 57 (22.3%) at low level and 21 (8.2%) at very low level. For those who responded that there is no influence were 82 (25%), out of which 53 (64.6%) responded that there is no influence at very high level, 7 (8.5%) at moderate level, 6 (7.3%) at low level and 13 (15.9%) at very low level and 3 (3.7%) at very low level. Therefore, road transport stakeholders influence operations of the concession of the rift valley rail consortium hence financing BOT projects. Majority 75% of the respondents noted the influence, while 25% did note.

This implies that there is a chance of 1.8 (1+75/100) times road transport stakeholders influencing financing of BOT projects. To confirm the two results of

frequency percentage and cross tabulation a Chi- square test was carried out and gave a p value of 0.001 confirming the influence of road transport stake holders on operations of the railway transport.

In establishing the comparative power function of each variable within environmental factors, the study conducted a Wald test and the results presentment as in table 4.59;

Table 4.59: variables in the equation – political and legal factors

	INDICATORS	**B**	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**
	Variables in the equation						
Step 1(a)	**GTERMINA**	.091	.126	.516	1	.473	1.095
	GOVTAX	.105	.125	.702	1	.402	1.111
	GOVMGTC	-.148	.133	1.228	1	.268	.863
	GOVLIABL	-.010	.110	.008	1	.929	.990
	RTS	.101	.086	1.352	1	.245	1.106
	Constant	**-.995**	**.373**	**7.109**	**1**	**.008**	**.370**

Variable(s) entered on step 1: Gtermina, Govtax, Govmgtc, Govliabl, Rts.

Table 4.59 depicts the results of a Wald test that political and legal factors power of influence on financing BOT projects. Government termination has a Wald result of 0.516 and a significance of 0.473, government intention to increase tax has a Wald test result of 0.702 and a significance of 0.402. Government management in concessions contracts has a Wald test 1.228 and a significance of 0.268, government liabilities on concessional contract has a Wald test of 0.008 and a significance of 0.929 and finally Road transport sector has a Wald test of 1.352 and a significance of 0.245. Therefore among the indicators of political and legal factors all the variables

193

are influencing financing of BOT projects. The result also indicates that the predictor indicator with the most power is the government liabilities which is 0.08 and 0.929 respectively this can be attributed to the answers received when the respondents stating that assets conceded during the contract reflects a huge responsibility, which if the project fails the government may lose a lot of money.

This is followed by the Government intention to terminate the contract with a Wald figure of 0.0702 and a significance of 0.402, this could be attributed to commencement the standard gauge construction, however considering the views during the interview standard gauge will not affect the operation of the rift valley railway because they are operating metric gauge which carries more load compared to standard gauge. Therefore the line will still be required considering the tonnage it can transport. This is followed by government intention to change taxes which is 0.0516 and 0.473 respectively, then closely followed by the power of road transport sector which is 1.352 and 0.245, lastly government management of concessional contract with a Wald of 1.228 and 0.268 significance.

In comparison to the other indicators of political and legal factors, the result shows that the significance decreases to zero as the distance between the parameters estimate and the null value increases. These results confirm the fear of Public Forum on Kenya's Railways Transportation Policy (2014). The viability of the concession is affected by other policy decisions that the government of Kenya and its counterpart in Uganda make while the concession subsists. Through the budget speech for 2013/14, Kenya's cabinet secretary for finance introduced the Railways Development Levy (RDL). The purpose of this tax was to acquire funds to supplement the construction of the impended Standard Gauge Railway (SGR) from Mombasa to Nairobi and later right through Uganda to be terminated in Kigali and also to rehabilitate the roads.

While the policy idea here is understandable, the quick imposition of the tax raises several policy questions related to the design and the incidence of that tax. The primary issue here is that while the tax is simple to administer, it is not well designed because it is applied on all importers and is borne by the competing transporters such as the existing railway concessionaire. The fiscal effect of the existing railways operators is subsidizing a competitor. According to research (for the Growth Plan) Infrastructure significant has changes in an economy over the past twenty years: This economic shift influences the distribution of goods throughout the regional; transportation network must be able to accommodate shifting patterns in goods movements. The movements of goods are mostly done by long distance truck, based on value of goods moved. Other modes of travel (marine and/or air) support international goods transport.

Goods movement continues to rely on the road network for at least a portion of the journey, with truck transport either collecting or distributing goods to transportation terminals, manufacturing facilities, warehouses or retail outlets, therefore by having an efficient rail system will mean that some of the road transports will miss market and therefore driven out of business. These could be the contributing factor as to why the stakeholders in the road transport sector continue to sabotage the operation of the rail transport. Despite, policies developed by various levels of government being consistent with respect to the direction on land-use planning and transportation to promote strong communities, a clean and healthy environment, and a strong economy.

The policies recognize the complex inter-relationships among economic, environmental and social factors in planning. Railway which is the mode of transport which could deliver this lags behind in terms of service, based on value of goods

moved. The Wald test of the two indicators, government termination, and government liabilities showing a Wald of 0.516 and 0.008 and a significance of 0.473 and 0.929 respectively. The result of the two tend to decrease to zero as the distance between the parameter estimate and the null value increases, Therefore there is significance influence among the two indicator s of political and legal factors in influencing rail operation hence Financing BOT projects. The study created new knowledge by indentifying stake holder as major variable in the influence.

A study done Bogetoft and Olesen (2000) confirm that in order to secure cooperation, the project must be beneficial for all groups of members to cooperate. In other words, no group of members should be able to benefit individually. The findings confirm the results of Fulton (2001) that observed that due to their more heterogeneous interest, engaging other stakeholders in your activities may soften their heart and changed the their attitude on competition to stake holding.

Due to the behaviour of the variable in influencing financing BOT the study tested the joint influence of political and legal factor in moderating Macroeconomic, investment policy, financial, commercial, environmental factors and financing of BOT projects in Kenya and the result are shown in table 4.60,

Hypothesis 5: There is significant relationship between political and legal factors in moderating the perceived Macroeconomic, Investment policy, Financial and Commercial, Environmental factors and Financing of BOT projects in Kenya.

A linear regression was used to check and test the interaction between political and legal factors on macroeconomic, investment policy, financial, and environmental factors to financing BOT projects, and the results were presented as in table 4.60.

Table 4.60: Macroeconomic, investment policy, financial, commercial, environmental factors and financing of BOT projects in Kenya

BOT Projects Financing	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
							Lower Bound	Upper Bound
Interest Rates	-.376	.468	.646	1	.042	.687	.274	1.718
Debt/Equity Ratio	-.259	.536	.234	1	.042	.771	.270	2.207
Contract Period	.470	.588	.639	1	.042	1.600	.505	5.063
Concession period	.683	.522	1.716	1	.019	1.980	.712	5.503
Environmental Policies	-.783	.595	1.732	1	.018	.457	.142	1.467
Construction cost	.941	.533	3.113	1	.017	2.563	.901	7.292
Government Tax	-.753	.556	1.834	1	.017	.471	.158	1.400
Inflation rates	-.762	.493	2.385	1	.012	.467	.177	1.228
Operation Cost	.098	.479	.042	1	0.01	1.103	.432	2.820
Construction Period	-.838	.465	3.244	1	.007	.432	.174	1.077
Maintenance Cost	-1.090	.615	3.138	1	.007	.336	.101	1.123
Road transport	-.238	.445	.285	1	.006	.789	.330	1.886

Table 4.60 depicts how political and legal factors interact between macroeconomic factors, investment policy, financial policies, environmental policies and financing of BOT projects. Their significance is ranked from the highest in influence to the least as revealed by the Wald chi test.

Interest rates has a Wald of 0.646 and a significance value of 0.042, followed by Debt/Equity ratio with 0.234 and a significance value of 0.042, contract period follows with a Wald of 0.639 and a significance of 0.042. Concessional period is fourth in influence presenting a Wald of 1.716 and a significance value of 0.019,

followed by environmental policies with a Wald of 1.732 and a significance value of 0.018. The construction cost's Wald chi was 3.113 had a significance of 0.017, followed by Government taxes with a Wald of 1.834 and a significance of 0.017. Inflation rates had a Wald of 2.385 and a significance value of 0.012. operation costs had a Wald chi of 0.042 and a significance value of 0.01, the construction period had a Wald chi of 3.244 with a significance value of 0.007 while maintenance cost p[resented a Wald of 3.138 and a significance of 0.007 and finally, road transport Wald chi presented a 0.285 and a significance value of 0.006.

Therefore the P-values values presented exhibited a less than required significance levels hence the null hypothesis is rejected at 0.05 level of significance. Therefore the evidence is sufficient that political and legal factors moderates the joint influence of macroeconomic factors, investment policies, financial factors and environmental factors.

The results of Hypothesis testing supports Egert, Kozlu and Sutherland (2009) findings in their study done in Italy on regime change where they agreed with the earlier studies, that politics can change long term investment if not well backed by legal aspect. Political and legal institutions were a focus of this study. In order to elaborate on how legal framework contributed to lack of BOT financing as the regime change may lead to change of contract. Further Harris and Shukla (2003) acknowledge that as much as politics affect long term financing, legal factors should be part of the provision to secure investments. The findings are support Schneider and Frey (2010) study who argued that Political instability and violence makes a country less attractive to long term investments.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the study findings based on the themes of macroeconomics, investment policy, financial and environmental factors, the conclusions of the main findings, and recommendations

5.2 Findings

5.2.1: Macroeconomic factors and financing of BOT projects

The study findings showed that 65% who are the majority of the respondents indicated that interest rates have a high influence compared to 35% who responded that there was no influence. In conclusion, when interest rates increases or decreases by 1% financing BOT projects increases or decreases by 1.6 (1+65/100) times. A chi square test on the influence of interest rates to financing of BOT gave a p-value of 0.0366 which is less than the required significance level of 0.05. This showed that there is perceived significant influence of interest rates on financing of BOT therefore rejection of the null hypothesis is the conclusion.

In this study 63% of the respondents indicated that inflation has a high influence on BOT financing compared to 37% of the respondents who noted that there is influence. The chi- square calculated gave a p - Value of 0.05 which is equal to the required significance level of 0.05. This indicates that there is perceived significant influence of inflation rate and BOT financing. Therefore, the null hypothesis was rejected.

The study revealed that that debts and equity ratio have an influence on financing BOT projects, as indicated by 65% of respondents who noted a high influence compared to 35% who noted that there was no influence. A chi square test

gave p-vales of 0.019, which is less than the required significance level of 0.05. This therefore indicated that the null hypothesis is rejected and the study accepted the alternative hypothesis, that there is perceived significant influence between debts and equity on financing BOT projects. In overall 67% of the respondents responded that discount rates influence financing of BOT, compared to 33% who responded that the influence of discount rate on financing BOT projects does not exist.

5.2.2: Investment Policy and financing of BOT.

The study revealed that construction period has a great influence on financing BOT projects. The overall majority who were 67% of the respondents noted that the influence exists compared to 33% who responded that there is no influence. The Chi square test in the table has given a p value of 0.029 which is less than the required significance level of 0.05. The study rejected the null hypothesis at 0.05 level of significance. This showed that there is perceived significant influence of construction period and financing BOT projects.

The study reveals that, 45.6% respondents responded that contract period influence financing of BOT projects at a very high level, 24.8%at a high level, 12.8% at a moderate level, 9.7% at a very low level and 7.1%at a low level. With those who responded that constructions period does not influence, 11.1% of respondents indicated that there is no influence to financing BOT projects at a very high level, 12.5% at a high level, 3.2% at moderate level 14.3% at a low level, and 8.9% at a very low level. With the overall majority of 68% supporting that constructions period have a great influence on financing of BOT compared to 32% who indicated that there is no influence. The implication is that when contract period increased by one day financing of BOT projects changes by 1.7 (1 + 68/100) times. The chi square test gave

a p value of 0.005 which is below 0.05 confidence level. This indicates that there is a significant relationship, thus rejection of the null hypothesis.

The findings reveals that out of 338 respondents who participated in the study 52.7% of the respondents responded that investors benefits influence financing BOT projects at a very high level, 27% at high level, 10.6% at moderate level 5.8%at low level and 4% at very low level. Very few respondents responded that investor's benefits do not influence the financing of BOT. As indicated in the table 12.5% responded that there is no influence at high level, 19.3% at high level, 18.6% at moderate level, 4.7%at low level and 3.9% at very low level. Therefore there is influence between investor's benefits and financing BOT projects.

The finding implies that when investor's benefits increases by a shilling financing of BOT increases by 1.7 times with overall majority of 68% supporting this compared to 32% who indicated that there is no influence.

The findings of cross tabulation reveal that majority 68% responded that there is high influence of investor's benefits on Financing of BOT projects compared to 32% who noted that there is no influence. The results further indicates that, when concessionaire's benefits increase or decreases by a shilling , interest to finance BOT projects increases or decreases by 1.3 times moderately.

The study found out that a significant number of the respondents 29.6% responded that there is a very high influence of completion period to financing of BOT projects, compared to those 15.8% who responded that there is no influence. In total those who responded that there is an influence were 68%. A chi -square test gave a p value of 0.021 indicating a significant relationship because the p value is less than 0.05.

The findings indicates that there is an influence of expanse on constructions on BOT projects financing as indicated by 37% at very high level as compared to 28%.who indicated that there is no relationship at high level . The average total respondents who responded that there is an influence of expanse construction to financing of BOT were 69% compared to the total respondents who indicated that there was no influence who were 31%. The chi square calculation gave a significant value of 0.0154 indicating that there is significant relationship between construction period and financing BOT projects. Therefore the null hypothesis was rejected.

The study established that the influence of default by concessionaire is high to financing of BOT with 39.3% indicating the influence is very high, compared to 13.8% of the respondents who responded that there is no influence at a high level. The influence as indicated by 72% of the respondents to financing of BOT exists, compared to only 28% of the respondents who responded that there was no influence. A chi square test gave p-value of 0.0325 indicating that there is significant relationship between default by concessionaire in constructing the rail project and BOT financing because the value is less than 0.05 assumed confidence level.

The result of the Wald test statistic for coefficient corresponding to the variables construction gave the p- values of 0.046 followed by contract period coefficient as 1.645 with p value of 0.020, investors benefits coefficient as 0.144 and a p-value of 0.017, completion period coefficient of 0.288 with a p-value of 0.049, experience coefficient of 5.241 and a p-value of 0.022, and finally default by concessionaries coefficient of 0.343 with p value of 0.045.This means that among the predictor of investment policies contract period has the strongest influence on financing BOT projects.

5.2.3: Financial Factors and financing of BOT

Responses from the construction cost revealed that out of 338 respondents a total of 74% noted that construction cost influences financing of BOT projects while 26% stated that the construction cost does not influence financing of BOT projects in Kenya. Moreover perceived influence of dependency on contractors in meeting construction costs to financing of BOT existed with 72% majority of the respondents supporting that there is an influence while 28% responded that there is no influence. On project termination by the concessioners an overall 74% of the respondents showed its perceived influence in financing BOT projects while 26% among the respondents responded that it does not influence financing of BOT projects in Kenya. A majority of the respondents in this category, 76.6% supported the perceived influence of government's default in facilitating and financing BOT projects compared to 23.4% who responded that there is no influence. Availability of technology expertise and financing BOT was presented with a majority of 73% who noted its perceived influence as compared to 27% who responded that there is no influence between availability of technology and financing of BOT projects. under the concessionaire's expertise in adapting to changing requirements for financing BOT projects when compared across the groups, its perceived influence on financing BOT projects in Kenya was supported by a majority of 72% as compared to 38% those who indicated that there is no influence.

The P-value of components within financial factors are less than the significant level (0.05) thus indicating that construction costs has a significance value of 0.021, followed by the operation costs with a significance value of 0.0145. This observed test statistics are in the critical region and therefore the null hypothesis was

rejected and the study concludes that there is significant relationship between perceived financial factors influence and financing BOT projects.

The value of the Wald test statistic for coefficient corresponding to the variables cash is 1.419 and an p-value of 0.023, contract termination by government 0.014 and p-value of 0.009, termination of contract by concessionaires Wald of 5.074 and p-value of 0.024, Government default with a Wald test of 2.780 and p-value of 0.019, technology maintenance of Wald of 0.674 with a p-value of 0.041 and expertise in the concession of a Wald test 1.185 and a p-value of 0.028.Therefore among the financial and commercial factors predictors, contract termination has the strongest power because both value tends toward zero.

5.2.4: Environmental factors and Financing of BOT

The study found out that environmental policies have a perceived influence on financing of BOT projects as supported by 74% of the respondents compared to 26% who indicated that there is no influence followed by a perceived influence of laws and policies on environment protection and financing BOT projects as supported by 76% compared to 24% of the total respondents who noted no influence. Force majeure risks occurrences had a perceived influence on financing of BOT projects as supported by 74% of the respondents compared to 26% of the respondents who indicated that there is no influence. A majority 76% responded that public opinion's perceived influence on financing BOT projects compared to only 24% who responded that there is no influence.

The chi square test was carried out, gave a p - value of 0.008 which is below confidence interval of 0.05. Therefore, the null hypothesis is rejected. Meaning that

there is significant relationship between environmental policies and financing of BOT projects in Kenya.

The result of a Wald test on environmental factors indicators and their power of influence in financing BOT projects. Environmental policy has a Wald result 0.144, a significance value of 0.070, laws and policies on environment has a Wald result of 1.389, a significance of 0.239, force majeure risks had a Wald result of 0.165, and a significance 0.006 and public opinion has a Wald result of 0.713 and a significance of 0.039.Therefore among the environmental factors environmental policy has the strongest power of influence.

5.2.5: Political and Legal factors and financing of BOT

Results showed that a majority of respondents 77% responded that there was a very high perceived influence of the government's termination of concession contract on BOT financing, while 33% responded that there was no perceived influence of the government termination of concession contract on BOT projects financing. The government's intentions to change taxes and laws during the concession period had a perceived influence on financing BOT projects with a majority of 77% whereas 23% responded that it did not have an influence on financing BOT projects. Further a majority 76% of the respondents noted that there is a perceived influence of government of Kenya's experience in management of concessional contracts and financing of BOT projects as compared to 24% who responded that there is no influence. Moreover, a majority 75% of the respondents noted a perceived influence of road transport stakeholders on the operations of the concession of the Rift valley consortium, while 25% did not.

Interest rates has a Wald of 0.646 and a significance value of 0.042, followed by Debt/Equity ratio with 0.234 and a significance value of 0.042, contract period follows with a Wald of 0.639 and a significance of 0.042. Concessional period is fourth in influence presenting a Wald of 1.716 and a significance value of 0.019, followed by environmental policies with a Wald of 1.732 and a significance value of 0.018. The construction cost's Wald chi was 3.113 had a significance of 0.017, followed by Government taxes with a Wald of 1.834 and a significance of 0.017. Inflation rates had a Wald of 2.385 and a significance value of 0.012. operation costs had a Wald chi of 0.042 and a significance value of 0.01, the construction period had a Wald chi of 3.244 with a significance value of 0.007 while maintenance cost p[resented a Wald of 3.138 and a significance of 0.007 and finally, road transport Wald chi presented a 0.285 and a significance value of 0.006.

Therefore the P-values values presented exhibited a less than required significance levels hence the null hypothesis is rejected at 0.05 level of significance. Therefore the evidence is sufficient that political and legal factors moderates the joint influence of macroeconomic factors, investment policies, financial factors and environmental factors.

5.3 CONCLUSIONS

In the light of the analysis of data and findings of the study the following conclusions were drawn;

That interest rates among the macroeconomic factors highly influence financing of build operate transfer projects. This was reported by the respondents as attributed to discount rate on borrowing which some time is very low, capital for start-

up in project which is always less than two thirds of the entire cost, this subject the investors to borrowing from the domestic market during the contract. The study therefore concludes that when interest rate raises or decreases by 1%, financing Build, Operate Transfer projects increases or decrease by 1.6 times. The study also tested the significance relationship between interest rate and financing BOT and rejected the null hypothesis. This therefore means that interest rate has a relationship with financing BOT project and therefore it influences whether to finance or not to finance BOT projects.

The second indicator among the macroeconomic was inflation rate influence on financing of build operate transfer project in Kenya. It was found that the demand of borrowing from the domestic market is attributed to the rise of the demand of money in the local market, which was reported as lack of shareholder in the concession due to internal wrangles .These led to the value of shares to be very low and hence could not fetched sufficient capital. The conclusion drown on this study is that if inflation rate increases or decreases by 1% financing build operate projects decreases or increases by 1.6 times the percentage decrease or increase. Hypothesis testing was also done and the result therefore confirmed the significant relationship between inflation rate and financing of build operate transfer projects. The study concludes that inflation rate influences financing BOT project.

This was the third predictor that the study investigated and that when looking at the percentage frequency distribution of respondents. The study concludes that debts and equity do not influence financing of BOT projects. The study concludes that consortium borrowed too much money from the local market due to lack of potential shareholders. The study tested the hypothesis and rejected the null hypothesis and

concludes that the amount of money borrowed in terms of debts and equity influence financing BOT projects.

The fourth predictor among macroeconomic variable to be investigated was discount rate influence on financing BOT project. The study concludes that by increases or decreases discount rate by 1% will decreases or increase financing BOT margin of 1.7 times, therefore drawing a conclusion that Discount does not influence financing BOT projects. This was attributed to the upfront agreement on borrowed money by the investors. Based on the opinions of the respondents there is need for policies to be articulated on tackling the rise of interest rates in relation to BOT investments in Kenya.

Under the investment policy, the study established that there is influence of construction cost on financing of BOT project with 74% of the respondents noted that there is relationship compared to a total of 26% .Therefore construction period influences financing of BOT projects. The study concludes that when construction period is increases or decreases by 1 day financing BOT projects increases or decreases by up to 1.7(1+74/100) times. The chi square test calculated gave a p value of 0.0211, therefore, the null hypothesis was rejected and hence the study conclude that the construction period as a predictor under investment policy influence financing of BOT project.

The second predictor under investment policy was to establish the influence of concession period on financing BOT projects 72% of the respondents noted that there is a significant influence. The study concludes that concession period when increased by a day increases financing BOT projects vice verse. The study tested the hypothesis by calculating chi square which gave a p value of 0.0145 which less than the assumed

confidence interval of 0.05. Therefore the null hypothesis was rejected and the study concludes that concession period has influence on financing BOT projects.

The third predictor under the variable investment policy was to establish the influence of contract period on financing BOT project, majority 68% of the respondent noted that contract period influence financing of BOT projects. The study concludes that when contract period is extended by 1 day financing BOT project will increase by 1.6 (1+68/100) times. The study tested the hypothesis and rejected the null hypothesis meaning that there is significance relationship between contract periods and financing BOT project, therefore in conclusion contract period has an influence on financing BOT project. The study also found that investors benefit depicts 68% influence and 32% not influence, therefore under the investors benefits the study conclude that investor benefits influence financing BOT projects . This indicates that when investors benefits increases or decreases by 1 shilling, financing BOT projects increases or decreases by 1.7 times (1+68/100).

The findings from completion period reveals that 69% noted that the influence exists and 31% responded that there was no influence, in conclusion, when completion period increases or decreases by a day, financing BOT projects increases or decreases by 1.7 time. The study tested the hypothesis that there is no significance relationship between completion period and financing BOT project. The null hypothesis was rejected and the study concludes that there is significance relationship between completion period and financing BOT projects. Hence, completion period influence financing BOT projects. The study also concluded that due to operation challenges experienced by the concession, concessionaires may default in completing the project irrespective of the contractual terms and thereby bringing up the need of the host government to develop a policy that guides BOT contracts on termination

clauses, inefficiencies, and how to increase concessional periods to provide adequate time in completion of projects.

Under the third objective which was to assess how financial factors influence financing of BOT projects construction cost influence is 74%.The study conclusion is that construction cost influence financing of BOT project. The study also tested the null hypothesis that there is no significance between construction cost and financing BOT projects. The result indicates that the p-value is less than 0.05 level significance. In conclusion, there is sufficient evidence that construction cost influence financing BOT projects.

Operation cost influence on BOT financing was 72% and when the hypothesis was tested the calculated p-value is less than the 0.05 assumed confidences, in conclusion the result indicates that there is sufficient evidence that operation cost influence financing BOT projects. Under financial and commercial variables, project termination by concessionaires was 74%. Therefore, concessionaires may terminate the contract before the end of the contract. On the default by the government of Kenya, the result is 76.6%. Therefore; the government of Kenya may default in facilitating the concession project. Also noted was that 73% stating that availability of technology influence financing BOT projects. The study concludes that none performance of the concession may be as a result of lack of technological expertise and concessionaires knowledge to adopt to change. Among the financial factors predictors, construction cost has the most power of influence on financing BOT projects therefore there is sufficient need to protect the conceded assets by increasing the invested capital to deter foreign investors from borrowing in the domestic market, this can be undertaken as a matter of policy guidelines within the concessional agreements.

Laws and policies on environment indicate that 76% is of the influence. The study also tested the hypothesis that there is no significance between laws and environment and financing BOT projects. The calculated p-value was less than the assumed level of significance, which is 0.05. In conclusion, there is sufficient evidence that laws and policies on environment influence financing BOT projects.

Public opinion was also found to bear the greatest influence on financing BOT projects, this is because if public is negative against the projects shareholders may lose it interest and hence decreasing its value Force majeure risks revealed 74% therefore force majeure risk influence financing BOT projects. Public opinion rating was 76% within; therefore in conclusion, public opinion has influence on financing BOT projects. What people are perceived about the project determines its financing model. There is need to address the way the public perceived project developed by foreigners, this gives rise to development of a guideline that will sensitize the public on the importance of certain infrastructural projects as procured in BOT.

On the political and legal factors moderate the joint influence on financing BOT project the study made the following conclusion, that legal and political factor increases the strength of the relationship between the variables and financing BOT projects. That the government may terminate the concession if the standard gauge railway becomes efficient. Secondly, the government had no intention of increasing taxes during the concession contract. The study concludes that Kenya government has no experience in management of the concession contract and was relying on the experts of the consortium. Finally, road transport sector significantly influence the performances of the rift valley railway and that the owners of the bus company, long distance travel and the matatu perception is that they may be out of business. That concession had no enough cash to financing its operation, hence borrowed from the

domestic market that increase the demand for money and hence shot up the interest rate. Therefore, as shown by the results politics and legal moderate macroeconomics, investment policies, financial and commercial, and environmental factors in determining financing BOT.

5.4 RECOMMENDATIONS

Keeping in view with the findings of the study and conclusion drawn, the following recommendations are being made which may be helpful for the improvement of the present status of financing BOT projects and for further researches. It may provide guidelines;

1. Based on the results of this research it is found that inflation constitute approximately 65% of the influence on financing BOT projects .Particular attention to this should be to increased interest rates, increasing interest rates will increase the cost of borrowing, discouraging concessionaries from borrowing and spending. Make it more attractive to save money, reduce the disposable income of those with mortgages and increased the value of the exchange rate leading to lower exports and more imports. This will help reduce the growth of Aggregate Demand in the economy. The slower growth will then lead to lower inflation that will reduce consumer spending; hence leaving the house hold with some income to save that can in future be invested in long term concessions.

2. Bring in an investor; this may be the least - favorite option. However, you might want a partner who can take over a certain segment of your business. As an equity investment, your debt-to-equity ratio decreases. Implementation of these strategies will help reduce the consortium debt. The Restructuring debt does not necessarily reduce the debt you owe. However, it can increase cash

and disposable income. If you find that, you do not have the cash to pay your debts, and then talk with the creditor. See if a supplier will extend terms — giving you longer to pay the bills and reduce the monthly payments. This will lower the Interest rates. It does not change the amount of principal you owe. It does decrease your interest expense, which increases your bottom line and equity, thus reducing your debt-to-equity ratio.

3. Because what happened in the past is not a guarantee of what will happen in the future, it is often useful for concessionaires to look at expected returns going forward. In addition to the historical returns, and estimating the current expected total return by simply asking investors what they expect. Of course, this is always easier said than done. Borrowing should be once reflecting the total amount to complete the project, hence negotiating discount rate that is static and changes not of the years the contract is in place.

4. Although it is within the clause that the government should not terminate the contract before the expiration of the concession term. The slowness of the operation coupled with inefficiency of the rift valley rail consortium may cost the government a fortune. This therefore give need to address the issue within the PPP act on the termination clause, to address the lack of concessionaire's ability to raise enough funds or render finance the project. Therefore, it is recommended that the government introduce inefficiency and non-performing clause to allow termination of the concessional contract before the end of the contract without liquidation.

5. Given that lack of ability to apply Technology in maintenance of the rail assets was because of absorption of the staff from the KRC, there is need for short term training courses to imparting skills on workers of the consortium in using

technology in maintain rail assets. This training will be of value to the new employed workers and the old ones as they will adopt to the new available technology which may enhance efficiency of operation and finally increase return and timely hand over of the project in viable state to the Government of Kenya.

6. Public opinion was found to bear the greatest influence; public opinion may be improved by sensitizing the users on the benefit of having a positive attitude on the availability of the railway line. This will make the project attract more funds and ease building of the facility operate and transfer the facility on time.

7. Laws and policies on environment also played a significant role in attracting funding. Despite availability of these laws and regulation guiding PPP, there is none directly dealing with the implementation of BOT projects. This therefore calls for development of specific policy that guide implementation of BOT projects, delinking BOT laws from public private partnership may be of value to the field of project financing.

8. Based on the results, Road transport sector plays a significant influence on the performance of rail transport sector. There is dire need to harmonize the two sectors by developing a policy that enables them to operate like partners and not competitors

5.5. Suggestion for further research

1. This study has identified several factors that are influencing financing of BOT projects infrequently and brings ineffectiveness. Future research should further evaluate each techniques for monitoring each of these factors and potential new techniques that could be applied.

2. The study covered the operations of the consortium in Kenya; therefore, the results of this study can only be inferred. Further research should cover Kenya and Uganda region as this may bring different findings.

3. Under concessional contracts, BOT is one among the many models used in financing infrastructure projects as covered by this study. Future studies should explore other models such as BOO, BOOT, BLT.

5.6. Contribution to the body of Knowledge.

OBJECTIVE	CONTRIBUTION TO KNOWLEDGE
Macroeconomic Factors and BOT financing	The findings of this study added new knowledge to the results of a study done by Edakasi (2011) in Uganda on effect of interest rates on loan. The study was limited on general repayment loans affected by high interest rates. This study narrowed down to how interest rates influence decisions on Financing BOT projects. This study also analyzed the weight of the influence of inflation rates on BOT financing unlike Rasumesen (2003) who only brought about the general effects of Inflation rates.
Investment Policy and Financing of BOT	This study finding elaborates what Vervoot *et al.,* (2014) came up with that long-term projects with incomes or expenses in the future, take price level development into account at the beginning of the project in order for investors to know the size of their expenses, period of construction and

	revenues generated in the future. This study finding has specified how investment policy factors directly influence the decisions on whether to finance BOT projects or not.
Financial Factors and financing of BOT projects	This finding provides more information by being specific on the construction period`s impact on BOT financing where us Shen *et al.,* (2002) only analyzed the risks involved in short concession period and their effect to BOT financing without being specific on each element of the concession period which includes construction timelines.
Environmental Factors and Financing of BOT projects	The study findings have specified how the analysis of the environmental factors and the impact of a BOT project on environment influences decisions on funding unlike a study done by U.S. Department of Transportation (2010) which only argued that environmental research and pursuant governmental regulations are changing the way companies do business and how

	transportation systems address the future
	The study adds new knowledge on how to shape the public opinion on BOT funded project unlike the study of Yeo &Tiong (2000) who only dwell on positive management of risk and not taking public opinion as risk.
Political and legal factors and financing of BOT projects	The findings adds new knowledge to the results of a study done by Balloch & Taylor (2001) first, in terms of *policy and institutions*, the country risks must be manageable, there must be strong government support. The findings have specified how government support and evidence of influences the financing of BOT can be measure. The study has also added new knowledge on the importance of having a joint concession of the transport sector that is inclusive.

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<div align="center">**APPENDICES**</div>

Transmittal Letter

My name is Stephen Okelo Lucas. I am a **PhD** student at the University of Nairobi. Currently, I am conducting a survey on **Factors influencing financing of build-operate-transfer projects in Kenya: the case of Rift Valley Railways Consortium.** I am working with research assistance we intend to issue self-administered questionnaire to manager who volunteer to take part in the study. Filling a questionnaire is estimated to take 20 and 30 minutes.

The purpose of this letter is to request you to participate in this study. You may be asked questions on anything about the survey and your participation. When you are asked questions, you may decide to volunteer or decline. The output of this study is purely for academic purposes

Given the important of the study you are requested to spare your time and complete a questionnaire. The study has no direct benefit to participants. Beside there are no risk to your participation. You are free to volunteer and withdraw from the study at any time without any penalty. The information obtained will be used for research purpose only and will be kept confidential.

Thank you for your time and God bless you.

STEPHEN OKELO LUCAS

PHD STUDENT

Appendix 11: Questionnaires for Operation Heads, Technical Staff and Senior Managers

Instruction

Please tick where appropriate (✓)

Section A: Demographic Information

1.   What is your age bracket?

a.   18-25 years

b.   26-35 years

c.   36-45 years

d.   45-55 years

e.   Above 55 years

2.   What is your position in this organisation?

Operation Head

Technical Staff

Senior Manager

3.   How long have you served in the organization?

a.   2 – 5 years

b.   5 – 10 years

c.   10 – 15 years

d.   Over 15 years

Section B: Seeks to capture information on the influence of these factors on financing Build-Operate-Transfer Projects

4.   Do you think interest rates influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes, explain _

5.   Do discount rates influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes, explain _

6.   Do Inflation rates influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes, explain _

7.   Does Debt/equity ratio influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes explain_ _

8.   Do construction period influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes, explain_ _

9.   Does Concession period influence provision of rail transport through Build-Operate-

Transfer financing?

Yes   ☐   No   ☐

 If yes, explain _

10.   Does Contract period influence provision of rail transport through Build-Operate-

Transfer financing?

Yes   ☐   No   ☐

If yes, explain _

11.   Do Political stability influence provision of rail transport through Build-Operate-

Transfer financing?

Yes   ☐   No   ☐

If yes explain_ _

12.   Does Government experience in BOT influence provision of rail transport through

Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes, explain _

13.   Does legal framework for realizing BOT influence provision of rail transport through

Build Operate Transfer financing?

Yes   ☐   No   ☐

If yes, explain_ _

14.   Does Out of control risk influence provision of rail transport through Build-Operate-

Transfer financing

Yes   ☐   No   ☐

If yes explain _

15.   Do Highly effective privatization agency influence provision of rail transport through Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes, explain _

16.   Does Construction cost influence provision of rail transport through Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes, explain _

17.   Does Operation cost influence provision of rail transport through Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes explain _

18.   Does Maintenance cost influence provision of rail transport through Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes explain _

19.   Does Environment policies influence provision of rail transport through Build-Operate-Transfer financing

Yes   ☐   No   ☐

If yes explain _

20.   Does Public acceptance in the idea influence provision of rail transport through Build-Operate-Transfer financing?

Yes   ☐   No   ☐

If yes explain _

Section C: Measurement scale on the relationship between the variables and financing of BOT projects

Measurement scale

Instructions

Please tick where appropriate (✓)

Key:VL: Very Low = 1, **L:** Low = 2, **M:** Moderate = 3, **H:** High = 4, **VH:** Very High = 5

Statement	VL	L	M	H	VH
MACRO-ECONOMIC					
How would you rate the interest rates in Kenya from the time the concession was signed?					
How would you view the inflation rates in Kenya from the time the concession was signed?					
How would you rate the share prices of the companies involved in the concession?					
How would you rate the concessionaires' capability of obtaining domestic debts?					
Did the concessionaires demonstrate their capability of financing the BOT project in its entire lifespan?					
How would you rate the carrying out of feasibility studies, economic and risk assessment by the concessionaires?					
INVESTMENT POLICY					
How would you rate the cost overrun on construction					

period?					
How would you rate the default by concessionaire in constructing the rail project?					
How would you rate the concessional period and it benefits to concessionaires?					
How would you rate the investor's benefits from the concessional period?					
How would you rate the completion period of the rail project by concessionaire?					
How do you rate the increase in expense on construction period of the rail project?					
FINANCIAL FACTORS					
How would you rate the availability of sources of cash and equity during the construction period?					
How do you rate concessionaires' dependency on constructors in meeting construction costs?					
How would you rate the rail project termination by the concessionaires?					
How would you rate the government department's default in facilitating the rail project operation?					
How would you rate the availability of technological expertise in the maintenance of the rail project?					

How would you rate the concessionaire's expertise in adapting to changing requirements for project management?				
ENVIRONMENT				
How do you rate policies formulation in integrating environmental and social consideration in rail construction projects?				
How do you rate the laws and policies on environment protection relating to construction of the rail infrastructure projects?				
How would you rate the likely occurrence of force majeure risks during construction and operation period of the rail project?				
How do you rate the public's opinion on the concessional performance ?				
POLITICAL AND LEGAL FACTORS				
How do you rate the termination of concessions by the government of Kenya?				
How would you rate the government's taxations and change of laws during the concession period?				
How would you rate the government of Kenya's experience in management of concessional contracts?				

How would you rate the influence of standard gauge contracts on the operation of the concession of the Rift Valley Railway?					

In your opinion what would be the solution to the problems?

END

Appendix 1I1: Questionnaires for Operation Heads, Technical Staff and Senior Managers

Instruction

Please tick where appropriate (✓)

Section A: Demographic Information

21.   What is your age bracket?

a.   18-25 years   ☐

b.   26-35 years   ☐

c.   36-45 years   ☐

d.   45-55 years   ☐

e.   Above 55 years   ☐

22.   What is your position in this organisation?

Operation Head   ☐

Technical Staff   ☐

Senior Manager   ☐

23.   How long have you served in the organization?

a.   2 – 5 years   ☐

b.   5 – 10 years   ☐

c.   10 – 15 years   ☐

d.   Over 15 years   ☐

Section B: Seeks to capture information on the influence of these factors on financing Build-Operate-Transfer Projects

24.   Do you think interest rates influences the Financing of BOT in provision of rail transport infrastructure in Kenya?

Yes   ☐   No   ☐

If yes, explain _

25. Does discount rates the influence the Financing of BOT in provision of rail transport infrastructure in Kenya? Yes ☐ No ☐

If yes, explain _

26. Do Inflation rates influence the Financing of BOT in provision of rail transport infrastructure in Kenya?

Yes ☐ No ☐

If yes, explain _

27. Does Debt/equity ratio influence the Financing of BOT in provision of rail transport infrastructure in Kenya?

Yes ☐ No ☐

If yes explain_ _

28. Do construction period influence the Financing of BOT in provision of rail transport infrastructure in Kenya?

Yes ☐ No ☐

If yes, explain_ _

29. Does Concession period financing influence BOT in provision of rail transport infrastructure in Kenya?

Yes ☐ No ☐

If yes, explain _

30. Does Contract period influence the financing of BOT in provision of rail transport infrastructure in Kenya

Yes ☐ No ☐

If yes, explain _

31.   Do Political stability influence the Financing of BOT in provision of rail transport infrastructure in Kenya

Yes   ☐   No   ☐

If yes explain_ _

32.   Does Government experience in BOT financing influence the provision of rail transport infrastructure in Kenya

Yes   ☐   No   ☐

If yes, explain _

33.   Does legal framework for realizing BOT financing influence provision of rail transport infrastructure in Kenya

Yes   ☐   No   ☐

If yes, explain_ _

34.   Does Out of control risk in BOT financing influence provision of rail transport infrastructure in Kenya

Yes   ☐   No   ☐

If yes explain _

35.   Do Highly effective privatization agency influence financing of BOT in the provision of rail transport infrastructure in Kenya

Yes   ☐   No   ☐

If yes, explain _

36.   Does Construction cost of the Rail transport infrastructure influence financing of BOT projects in Kenya

Yes   ☐   No   ☐

If yes, explain _

37.   Does Operation cost of the rail transport infrastructure influence financing of BOT projects in Kenya

Yes   No

If yes explain _

38.   Does Maintenance cost of the rail transport influence financing of BOT transport in

Kenya

Yes   ☐   No   ☐

If yes explain _

39.   Does Environment policies   influence provision of rail transport infrastructure in

Kenya

Yes   ☐   No   ☐

If yes explain _

40.   Does Public acceptance in the idea influence provision of rail transport infrastructure

in Kenya?

Yes   ☐   No   ☐

If yes explain _

Appendix IV: Interview Guide for Railway Monitoring Staff and Government Officials

The following interview guide was used to solicit information from the senior manager of the concession, officials from the Ministry of Finance and Ministry of Transport and Infrastructure dealing with the concession.

Measurement scale

Instructions

Please tick where appropriate (✓)

Key:VL: Very Low = 1, **L:** Low = 2, **M:** Moderate = 3, **H:** High = 4, **VH:** Very High = 5

1.   How would you rate the interest rates in Kenya from the time the concession was signed?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

2.   How would you rate the inflation rates in Kenya from the time the concession was signed?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

3.   How would you rate the share prices of the companies involved in the concession?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

4.   How would you rate the concessionaires' capability of obtaining domestic debts?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

5.   How do rate concessionaires demonstrate their capability of financing the BOT project in its entire lifespan?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

6.   How would you rate the carrying out of feasibility studies on economic and risk assessment by the concessionaires?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

7.   How would you rate the cost overrun on construction period?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

8.   How would you rate the default by concessionaire in constructing the rail project?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

9.   How would you rate the concessional period and it benefits to concessionaires?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

10.   How would you rate the investor's benefits from the concessional period?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

11.   How would you rate the completion period of the rail project by concessionaire?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

12.   How do you rate the increase in interest expense on construction period of the rail project?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

13.   How would you rate the availability of sources of cash equity during the construction period?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

14.   How do you rate concessionaires' dependency on constructors in meeting construction costs?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

15.   How would you rate the rail project termination by the concessionaires?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

16.   How would you rate the government department's default in facilitating the rail project operation?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

17.   How would you rate the availability of technological expertise in the maintenance of the rail project?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

18.   How would you rate the concessionaire's expertise in adapting to changing requirements for Rail project management?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

19.   How do you rate policies formulation in integrating environmental and social consideration in rail construction projects?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

20.   How do you rate the laws and policies on environment protection relating to construction of the rail infrastructure projects?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

21.   How would you rate the likely occurrence of force majeure risks during construction and operation period of the rail project?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

22.   How do you rate the public's opinion on the concessional performance on the achievement of the rail project?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

23.   How do you rate the termination of concessions by the government of Kenya?

Very low ☐   Low ☐   Moderate ☐   High ☐   Very high ☐

24.	How would you rate the government's adverse actions on taxes and change of laws during the concession period?

Very low ☐	Low ☐	Moderate ☐	High ☐	Very high ☐

25.	How would you rate the government of Kenya's experience in management of concessional contracts?

Very low ☐	Low ☐	Moderate ☐	High ☐	Very high ☐

26.	How would you rate the influence of standard gauge contracts on the operation of the Rift Valley Railway concession?

Very low ☐	Low ☐	Moderate ☐	High ☐	Very high ☐

27.	In your own opinion, what do you think is affecting the financing of the concession? ---

28.	What would be the solution to the problem --

Appendix V: NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MR. STEPHEN OKELO LUCAS
of UNIVERSITY OF NAIROBI, 422-50100
KAKAMEGA,has been permitted to
conduct research in *Nairobi County*

on the topic: *FACTORS INFLUENCING*
FINANCING OF
BUILD-OPERATE-TRANSFER PROJECTS IN
KENYA: THE CASE OF RIFT VALLEY
RAILWAYS CONSORTIUM

for the period ending:
20th March,2015

Permit No : NACOSTI/P/14/2350/3289
Date Of Issue : 15th September,2014
Fee Recieved :Ksh 2,000

Applicant's
Signature

Secretary
National Commission for Science,
Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 3199

CONDITIONS: see back page

265