CAPITAL BUDGETING PRACTICES AND PERFORMANCE OF MATATU BUSINESS IN KISII COUNTY, KENYA

BY
ZAKKIES MOCHOGE WALTER
D61/77402/2015

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF MASTERS IN BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI

NOVEMBER 2016
DECLARATION

This research project is my original work and has not been presented for the award of a degree in any other university.

Signature ……………………… Date…………………………

Zakkies Mochoge Walter
D61/77402/2015

Declaration by Supervisor

Signature ……………………… Date…………………………

DR LUTHER OTIENO
DEDICATION

This research project is dedicated to all my family members. Let this serve as a demonstration of hard work and patience from all of us during my academic journey.
ACKNOWLEDGEMENT

I sincerely acknowledge the support and guidance accorded to me by my supervisor Dr. Luther Otieno during the preparation of this project. I am also grateful for the financial support from my family members.
# TABLE OF CONTENTS

DECLARATION.................................................................................................................. ii  
DEDICATION..................................................................................................................... iii  
ACKNOWLEDGEMENT......................................................................................................... iv  
LIST OF TABLES .................................................................................................................. viii  
ABSTRACT................................................................................................................................ ix  
ABBREVIATIONS AND ACRONYMS.................................................................................. x  

## CHAPTER ONE: INTRODUCTION ................................................................................. 1  
1.1 Background of the Study ............................................................................................... 1  
1.1.1 Capital Budgeting Practices ..................................................................................... 2  
1.1.2 Performance Measures ......................................................................................... 3  
1.1.3 Matatu Industry in Kenya ....................................................................................... 4  
1.1.4 Matatu Sector in Kisii County .................................................................................. 6  
1.2 Research Problem ......................................................................................................... 7  
1.3 Research Objective ....................................................................................................... 9  
1.4 Value of the Study ....................................................................................................... 10  

## CHAPTER TWO: LITERATURE REVIEW ................................................................. 11  
2.1 Introduction .................................................................................................................. 11  
2.2 Theoretical Review ....................................................................................................... 11  
2.2.1 Real Options Theory ............................................................................................. 11  
2.2.2 Arbitrage Pricing Theory ....................................................................................... 12  
2.2.3 Portfolio Theory .................................................................................................... 13  
2.3 Capital Budgeting Practices and Performance ............................................................ 14  
2.4 Capital Budgeting Techniques ...................................................................................... 16  
2.5 The Cost of Capital ...................................................................................................... 16  
2.6 Critique of the Existing Literature ............................................................................ 18  
2.7 Summary of the Chapter .............................................................................................. 18
CHAPTER THREE: RESEARCH METHODOLOGY ............................................. 21

3.1 Introduction .............................................................................................. 21
3.2 Research Design ....................................................................................... 21
3.3 Target Population ..................................................................................... 21
3.4 Sample Design .......................................................................................... 22
3.5 Data Collection .......................................................................................... 22
3.6 Data Analysis ............................................................................................. 24

CHAPTER FOUR: RESULTS AND DISCUSSIONS ........................................ 25

4.1 Introduction .............................................................................................. 25
4.2 Response Rate ........................................................................................... 25
4.3 Data Validity ............................................................................................... 27
4.4 Descriptive Analysis .................................................................................. 28
   4.4.1 Sources of Capital ............................................................................... 28
   4.4.2 Capital Budgeting Techniques .............................................................. 28
4.5 Correlation Analysis .................................................................................. 28
4.6 Regression Analysis ................................................................................... 29
4.7 Capital Budgeting Techniques .................................................................... 30

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ........................................................................................................... 32

5.1 Introduction .............................................................................................. 32
5.2 Conclusions ............................................................................................... 32
5.3 Recommendations ...................................................................................... 33
5.4 Limitations of Study .................................................................................. 34
5.5 Suggestion for Further Study ...................................................................... 34

REFERENCES ................................................................................................. 35

APPENDICES ................................................................................................... 38
Appendix I: Cover Letter ........................................................................................................... 38
Appendix ii: Letter of Authority ............................................................................................... 39
Appendix iii: List of Registered Saccos In Kisii County ....................................................... 40
Appendix IV: Research Questionnaire .................................................................................... 41
Appendix V: Originality Report ............................................................................................... 45
LIST OF TABLES

Table 1: Sample Distribution ........................................................................................................22
Table 2: Response Rate ....................................................................................................................25
Table 3: The Respondent’s Gender ...................................................................................................26
Table 4: Categorization of Respondents by Seating Capacity .........................................................26
Table 5: Occupation of Respondents other than Matatu Business .................................................26
Table 6: The Respondents Education Level .......................................................................................27
Table 7: Summary of Sources of Financing .....................................................................................28
Table 8 Application of Capital Budgeting Techniques ....................................................................28
Table 9: Correlation Analysis between Operations Costs and Returns .........................................29
Table 10: ANOVA Summary ..............................................................................................................29
Table 11: Regression Analysis Summary .........................................................................................29
Table 12: Regression Model Summary ............................................................................................30
ABSTRACT

The study meant to determine how returns in Matatu industry are influenced by capital budgeting practices. Capital budgeting techniques, cost of capital, and operation costs were independently examined to determine the extent to which they influence performance of Matatu business in Kisii County. This study is important to the investors in the Matatu business as it seeks to inform them of the importance of capital budgeting techniques, its contribution to existing knowledge on capital budgeting techniques and how it will assist the regulators and other government agencies in policy formulation. The research employed a survey design where primary data was collected through the use of questionnaire, and stratified random sampling method was used to select respondents from the population. The study found out that most operators do not apply capital budgeting techniques in evaluating their investments and those that apply use payback period. Most of the operators interviewed practice intuitive management. According to the study, most operators favored a combination of equity and debt capital. The major reason for use of debt was the easy to access it at a lower cost compared to other sources. The study recommends that Saccos should have plans to pool finances together through savings and issue loans to their member at a cheaper rate. The Saccos management should also hire at least one financial expert to advice members on financial matters. Capital budgeting is a complex process and from the study most operators do not understand it. Some of the major areas that operators require advice is on the risk identification and analysis and how to incorporate it in the forecasting of cash flows. Another area is on the application of capital budgeting techniques in evaluating their projects.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA</td>
<td>APT</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td></td>
<td>ATR</td>
<td>Arbitrage Pricing Theory</td>
</tr>
<tr>
<td></td>
<td>BOD</td>
<td>Asset Turnover Ratio</td>
</tr>
<tr>
<td></td>
<td>CAL</td>
<td>Board of Directors</td>
</tr>
<tr>
<td></td>
<td>CAPM</td>
<td>Capital Allocation Line</td>
</tr>
<tr>
<td></td>
<td>DCF</td>
<td>Capital Asset Pricing Model</td>
</tr>
<tr>
<td></td>
<td>IRR</td>
<td>Discounted Cash flows</td>
</tr>
<tr>
<td></td>
<td>KRA</td>
<td>Internal Rate of Return</td>
</tr>
<tr>
<td></td>
<td>MOA</td>
<td>Kenya Revenue Authority</td>
</tr>
<tr>
<td></td>
<td>NPV</td>
<td>Matatu Owners Association</td>
</tr>
<tr>
<td></td>
<td>NTSA</td>
<td>Net Present Value</td>
</tr>
<tr>
<td></td>
<td>OPM</td>
<td>Operating Profit Margin</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>National Transport and Safety Authority</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>Post-Modern Portfolio Theory</td>
</tr>
<tr>
<td></td>
<td>PSV</td>
<td>Passenger Service Vehicle</td>
</tr>
<tr>
<td></td>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td></td>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Decision makers are faced with puzzling task of making choices on the various issues facing the firm. Capital budgeting involves processes and techniques that enable managers to arrive at a decision. Capital budgeting decisions are key to the stability and growth of firms and individual businesses (Ryan & Ryan, 2002). Firms invest in both long term and short term ventures. Fixed assets are among the long-term investments that firms engage in since their period span beyond one year, and therefore a detailed plan is required on how the expected cash flows will be spent (Hirschey, 2003). Capital budgeting therefore involves a systematic process through which a firm’s capital assets are planned and controlled (Cherry, 1970). Capital budgeting is critical to any firm operating in a competitive environment because it enables such firms to utilize their wealth optimally by investing in projects that maximize shareholders’ wealth (Hermes, 2007). Capital budgeting decisions are very complex in that if hurriedly made without incorporating the right procedures and techniques, they can lead to bankruptcy and insolvency.

Studies indicate that Payback Period is the most used capital budgeting technique. The shortcoming of this technique is non-recognition of the time value of money (Graham & Harvey, 2001; Ryan & Ryan, 2002). Modern capital budgeting techniques such as NPV, IRR, and DCF do incorporate the time value of money and risk in evaluating investments. The Real options theory by Myers values real properties as opposed to financial options. It aims at eliminating imperfections of traditional NPV method in investment decisions. Myers pioneered the idea of real option after realizing that real property projects could not be valued using option pricing theory.
Matatu business in Kenya falls under the public transport industry. It involves buying of assets which require investing huge initial capital outlay and estimating future cash flows. Such projects are highly risk and irreversible (Hermes, 2007).

1.1.1 Capital Budgeting Practices

During the investment process, firms come up with various proposals on how they wish to invest their funds. Capital budgeting is the process through which the various proposals are discriminated based on a given criteria for the purpose of choosing the best among them for investment (Shim and Siegel, 1994). In performing this process, managers can act intuitively or apply some criteria through the use of capital budgeting techniques. These techniques are classified into Traditional and modern techniques. Traditional techniques include Payback period and Accounting Rate of Return (ARR). Modern techniques include Internal Rate of Return (IRR), Modified internal rate of return (MIRR), Discounted cash flows (DCF) and Net Present Value (NPV).

Investments in capital assets are propositions with future returns that exceed one year. Long-term assets include Plant, buildings, machines, and people. Future benefits from an investment are hard to ascertain because of the uncertainty in macro-economic environment. Because of this, investment decisions become risky and therefore can only be estimated by taking into account risk and associated probabilities (Pandey 2001).

Payback period is the time taken for a given project to recoup its investment given a set of cash inflows. The technique considers cash flows before the period and ignores the time value of money. This technique offers little analysis of the project but is critical in capital budgeting since it gives an indication on the earliest time a project is likely to recoup its investment (Ryan & Ryan 2002).

NPV technique calculates present value of a project’s cash flows. It matches the project’s cash inflows to its cash outflows. For a project to be considered viable, the net present
value must be greater than zero (Graham & Harvey, 2001). Negative values indicate that the project is not profitable. When two investments are mutually exclusive, usually the one with a higher NPV is considered. IRR is the expected rate on return that an investor receives from his investment. Using trial and error method, it is possible to arrive at rate where the NPV is zero and the rate used becomes the IRR. Firms invest borrowed funds in their projects and by so doing, they must compensate the owners for using their funds. This compensation is the company's cost of capital, and projects’ required rate of return must be equal or more than this rate for the project to be considered viable (Seitz, 2005). Investment and financing decisions is a process that begins with selecting the projects that a firm intends to invest in, calculating the amount of capital to be invested in the project and how it should be financed (Drury 2004). Public transport industry involves purchasing of vehicles that do require a huge sum of initial outlay and the investments are long-term in nature. This therefore necessitates the use of capital budgeting techniques to evaluate such investments.

1.1.2 Performance Measures

Performance is undertaking of planned tasks in order to achieve some set goals. Targets are determined and some actions must be performed to produce results commensurate to predetermined targets (O’Regan et al 2008). In order to achieve set goals, resources are deployed progressively to achieve set goals (Ittner & Larcker, 2003). There are several ways through which financial performance can be measured. Such metrics include the Return on capital employed (ROCE) and Return on assets (ROA).

ROA measures how best the company is utilizing its assets in terms of profits. It gives an indication as to how efficient managers are utilizing resources to generate returns (Brigham E.F., 1986). Capital is relatively mobile and Managers therefore must employ it
productively to generate a maximum returns. ROA can be used to as a metric for evaluating the efficiency of a firm utilizing assets in terms of operational income. ROA also measures management’s effectiveness in deploying capital. Some firms are efficient but poor in utilizing capital. Return on assets, is calculated as net of income plus firm interest expense minus the estimated value of any unpaid operator labor over the average assets utilized. Return on assets is probably the single best overall measure of operating performance.

Return on equity (ROE) provides information on how best the company is utilizing its debt. ROE is determined dividing net income less estimated value of any unpaid labor and management fee by the average total equity (Olum, 1976). For a company to be able to service its debt, ROE should be higher than ROA for firms that use debt. If ROE is less than ROA, the implication is that debt does not earn enough to pay its cost. ROE is not a risk adjusted and therefore changes in risk of alternative investments should be considered for comparison purpose. ROE is measured relative to ROA and is mostly influenced by changes in ROA.

Operating profit margin is a measure of profit per unit output. It is calculated by dividing the dollar amount of return on assets by gross firm revenues (Reibstein 2010). Firms that have very high operating profit margin percentages are cost leaders. Asset turnover rate is a good indicator of how efficient a firm is employing its assets in revenue generating activities (M. Hudson and J. Lean, 2001). Firm managers must control and monitor them closely in order to improve performance (Harvey Arbeláez, 2004).

1.1.3 Matatu Industry in Kenya

The word Matatu is normally to describe a range of vehicles that are used for public transport in Kenya. The most common vehicles that are used as Matatus include 7-seater
cars, 14-seater Nissan and Toyota shark models, 25-seater mini-bus, 51 seater mini-buses, and buses (Aduwo, 1990). Matatus have evolved over the years in terms of numbers, operating environment and the type of vehicles in use. This evolution dates back to 1960s when the number of Matatus operating in Kenya were merely below 400. most of them operated as taxis within the major towns. Initially Matatu mode of public transport was not recognized until 1973 when the President of Kenya then, Mzee Jomo Kenyatta declared it as a legal mode of public transport. This was as a result of petitions and lobbying by Matatu operators to be recognized and legalized as a mode of public transport. The recognition was however granted under the condition that Matatus had to be issued with special transport licenses and comply with the PSV, insurance and traffic regulations (Aduwo, 1994). The country has a good road network that interconnects the various parts of the country and to the region. Currently the country utilizes several means of public transport. The common ones include Buses, 11 seater Matatu, 14 seater Matatu, minibuses, taxis, Tuk Tuks, motorcycles and bicycle commonly referred to as BodaBodas (PSV licensing board records, 2013).

Public service vehicles (PSVs) commonly known as “Matatu”, are the most preferred mode of public transport in Kenya. It is estimated that Matatu control about 80% of the entire public transport system with an annual turnover of Kshs73 billion. Matatu business contributes about Kshs 4 billion insurance industry through premiums every year and Kshs 1 billion as taxes annually to the treasury. The Matatu SACCOs have played a significant role in the management and growth of Matatu sector and are now respected brand in the sector. Saccos have played a role in improving the image of public transport, which was dominated by rogue drivers and touts without regard for traffic rules (Republic of Kenya economic survey, 2011). Matatu sector has contributed immensely to economic development of Kenya. It generates income to the owners, and creates employment...
opportunities directly and indirectly. It also contributes to sustainability of other sectors like insurance, associated businesses and taxes to the Central and Local governments. With over 22,052 licensed PSV operators in Kenya by December 2013, the sector is able to provide up to 80,000 and 56,000 jobs directly and indirectly respectively. Most Matatu businesses are individually owned and managed. However, due to introduction of new regulations by NTSA, each Matatu operating in Kenyan roads must be a member of a Sacco that is duly registered by NTSA. (NTSA regulations, 2013).

1.1.4 Matatu Sector in Kisii County

Kisii County is one of the counties with the highest number of Matatu investors in Kenya MOA (2013). It employs about 200,000 people directly and indirectly. Those that depend on this industry for their survival include drivers, conductors, mechanics, and spare parts dealers. According to NTSA survey (2015), there are about 12000 Matatu operators in Kisii County who operate as individuals and companies. The individual operators are registered under the 19 Saccos operating within the county as per the NTSA regulations (2013).

Mwangi (2014) carried a study on how budgetary planning tools affect the financial performance of registered public service vehicles companies in Kisii county and his findings were that the Most public service vehicle companies have no idea of these tools and those that have an idea of the tools do not use them effectively. The only emphasis was on record keeping and current asset management. This is explained by the fact that most public service vehicles transact using cash.

Despite the high growth experienced in the county, a number of operators have shut operations due high costs and uncertainty in revenues which were unprecedented. Both individual operators and companies have been victims. Companies like Obuya express,
Gusii Deluxe, linear Coach, and Keroka Executive all wound up operations. This study will investigate how capital budgeting practices contributes to the performance of Matatu sector in Kisii County.

1.2 Research Problem

Fixed assets are among the long-term investments that firms engage in since their life spans beyond one year, and therefore a detailed plan is required on how the expected cash flows will be spent (Hirschey, 2003). Capital budgeting therefore involves a systematic process through which a firm’s capital assets are planned and controlled (Cherry, 1970). Capital budgeting is critical to any firm operating in a competitive environment because it enables such firms to utilize their resources optimally by investing in projects that maximize shareholders’ wealth (Hermes, 2007).

Capital budgeting techniques Impact greatly on the performance of organizations and individual businesses alike. There is however a problem with many operators and managers in Matatu sector being unable to apply the techniques in the evaluation of investments. For a project to be considered viable, the net present value must be greater than zero (Graham & Harvey, 2001). The performance firms can be greatly affected on the way managers evaluate projects before they are selected and implemented. Applying capital budgeting techniques effectively will guarantee to a certain degree of financial performance because risk and uncertainties are taken care of. This study is justified because it will equip financial managers and operators of Matatu and public transport businesses with knowledge and skills on capital budgeting techniques and its importance to the organizations financial performance.

Studies in Kenya have indicated that public transport and particularly Matatu sector is inefficient. 14 seater Matatus are examples of inefficient Matatu vehicles in Kenya.
because their operational costs are extremely high relative to their returns (All Africa news, 2012). This is greatly attributed to lack of economies of scale as compared to high capacity buses which require a higher initial outlay to start. The cost of capital also influence greatly on profitability of Matatu sector (Mwangi, Otuya, Kamau, 2015).

Capital budgeting practices Impact greatly on the performance of organizations and individual businesses alike. There is however a problem with many operators and managers in Matatu sector being unable to apply the capital budgeting techniques during the appraisal of investments. For a project to be considered viable, the net present value must be greater than zero (Graham & Harvey, 2001). Failure by managers to effectively apply capital budgeting techniques will affect the performance of firms in terms of profitability. This study aims to equip financial managers of the Matatu businesses with knowledge and skills on how capital budgeting practices enhance performance.

Matatu business involve purchase of new vehicles, replacement of old vehicles, and refurbishing the old used vehicles. These are choices that require careful evaluation in order to come up with the best option (Stewart C.M., 1977). The real option theory provides a framework that can be used to evaluate real properties as opposed to financial options which are valued by Black-Scholes option pricing formula.

Statistics published by the Small Business Administration (SBA) suggest that out of the ten new startups, only seven of them survive for at least two years. Those that survive for at least five years amount to 51 percent. The common narrative is that 50 percent of startups collapse in the first years of operation and 95 percent fail within five years. The challenge here is number of those which perform that live to be inherited by a future generation past the 5th year. The Matatu sector is one such business that is domiciled in the transport industry. Public transport in other parts of the world is a success story, the same performance has not been replicated in Kenya (Oira A.S., 2015). There are various
contributing factors that contradict such in this industry that has been christened as chaotic sector (Klein, & Sorra, 1996).

In Kisii county most investors in this sector are individuals and first timers who try their lack oblivious of the challenges in the industry (Mwangi, 2014). Matatu business is a high risk venture and many investors have failed due to lack of knowledge in capital budgeting and financial management (Mwangi, 2014). The recent failure of major bus companies such as Linear Coach, Keroka executive, Gusii Deluxe, Obuya Express, and several others is a clear indication of something wrong in the Sector. The existence of poor financial management in the Kenyan public service vehicle businesses is something that cannot be disputed (Wangai 1992). However no empirical evidence has been advanced to prove it.

Onguso (2012) carried out a study on Matatu business returns are affected by financial management in Nakuru County found out that cost of capital and cost of operations greatly influence returns. Oira (2015) carried sought to find out the challenges that are facing public transport investors in Nairobi and his conclusions were that regulations, cartels, access to capital, and profitability of the industry affected investments in the industry.

Most of these studies have touched on the regulatory framework, challenges, costs and access to cheap credit. None has tried to investigate whether operators in Matatu sector carry investment appraisals and how it affects their performance. The question is: Do capital budgeting practices affect performance of Matatu business in Kisii County?

1.3 Research Objective

To determine the effect of Capital Budgeting techniques on the performance of Matatu business in Kisii County
1.4 Value of the Study

The study is valuable to Matatu industry managers since it provides an insight into the various approaches towards capital budgeting practices and its influence on the financial performance, uncertainties, and risk.

The study contributes to the pool knowledge by informing researchers on capital budgeting practices and how they affect the financial performance of Matatu operators in Kenya. Researchers can also use the study as their basis for further research.

The study is important to academicians who may wish to carry out further research in capital budgeting practices as this will contribute to the existing body of knowledge.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This area intends to examine the existing literature that address the issues related to public transport industry and in particular the Matatu Business Sector. The review will assist the researcher to identify gaps to be addressed by the study. The review shall present the studies by different researchers on capital budgeting practices in public transport industry and Matatu sector and incorporate their views in this study. This chapter shall review existing theories on which the study is anchored and then conclude by presenting a conceptual framework.

The theoretical framework shows how the research fits into existing knowledge and how best it contributes to the research being undertaken and field of study. (Maxwell, 2005)

2.2 Theoretical Review

The study was anchored on three major theories; Real Options Theory, Arbitrage Pricing Theory, and Portfolio Theory. The theories explains best the capital budgeting practices in Matatu business. Most studies show that both theories are relevant for evaluating privately held firms that do not issue publicly traded securities. Therefore this study focus on investigating whether the Real options, Arbitrage pricing, and portfolio theories explains the capital budgeting practices in Matatu business.

2.2.1 Real Options Theory

Real options theory was introduced by Stewart C. Myers in 1977 to value real properties. The Black-Scholes formula was critical in addressing problems around financial option pricing. Pointing at the limitations of traditional NPV method in investment appraisal, Myers fronted the idea of real option pricing and valuation upon realizing that the option
pricing theory by Black Scholes could not be used to carry out investment decisions on real properties. Real option, similar to the finance option, is a selectable right of real property investment under uncertain condition. The real options theory incorporates uncertainty as one of its key concepts. Uncertainty occurs where a manager is unable to predict the probabilities of an event occurring at a given time in future. Cash flows stemming from real properties are difficult to forecast and managers must have flexibility in assessing this uncertainty as it evolves (Gilbert 2004). When using real options approach, uncertainty is in the key consideration and investments are analyzed using existing DCF based techniques. Real options approach could prove to be beneficial in considering shut downs and other forms of disposals and divesture. Such actions are classical forms of investment options (Dixit and Pindyck1995).

Public Transport business revenues are highly uncertain and requires forecasting with some probability incorporated in it. Without proper forecasting of such cash flows, operators are likely to lose money due to operational costs outweighing revenues, (Mwangi M.C. 2015).

2.2.2 Arbitrage Pricing Theory

The theory was advanced principally by Stephen Ross in 1976. The view of investors, Returns of capital assets are stochastic in nature. APT is a single -period model and the static nature of assets return is consistent with a factor structure. Ross argues that if equilibrium prices offer no arbitrage opportunities over static portfolios of the assets, then the expected returns of financial assets can be modelled as a linear function of various macro-economic factors.
Empirical argument by Ross’ is that the theory is anchored on prevention of arbitrage process. Ross’ proved that there must be a linear relationship between expected returns and the factors loadings.

The APT is a substitute for the Capital Asset Pricing Model (CAPM) by William Sharpe. Both of them affirm a linear relationship between assets’ expected returns and their Betas. Beta is the measure of market risk that is undiversified.

Empirical tests on APT involves a procedure to identification of fundamental features of the factor structure. A collection of portfolios that are mean-variance efficient relative to the mean-variance frontier spanned by the existing assets is not a good test of the APT. As a result the test of the APT is not an adequate prove that a set of factor portfolios satisfies the linear relation between the expected return and its covariance with the factors portfolios.

Matatu industry involves purchasing of assets which are intended to generate a series of cash flows in future. The cash flows are highly uncertain given the challenges in the Matatu sector. APT will be useful in determining the equilibrium prices for such assets against the returns they are likely to generate.

2.2.3 Portfolio Theory

Harry Markowitz in 1959 laid the ground for Modern Portfolio Theory (MPT). He significantly contributed to the establishment of a framework through which investors can decide on the risk they are willing absorb and returns they expect as a result. Rational investors will always determine their minimum earnings and set their expected returns above it for them to achieve their investment goals (Pandey, 2001).

The major assumption underlying this theory is that most investors try to avoid risk as much as possible (Pandey, 2001). This means that investors will not put their entire
wealth in one asset or security but try and hold well-diversified portfolio. For an investor to maximize his returns and minimize risk, a rational investor must hold a diversified portfolio as per the modern portfolio theory (Stefan, 2007). The theory has evolved over time to form post-modern portfolio theory (PMPT) which has addressed the imperfections of relying upon variance as proxy for investor’s risk.

The capital asset pricing model (CAPM) by William Sharpe specifies the relationship between risk and required rates of return on asset in well-diversified portfolios. The CAPM being a single-factor model, specifies risk as a one factor function, the security’s beta coefficient (Brigham and Daves, 2004). There are several challenges that emanate from the assumptions of CAPM. One of the challenges one factor cannot be used to establish the equilibrium between risk and return, which is beta (Brigham, 2002). CAPM is useful in establishing the costs of securities and weighted average cost of capital. CAPM is also useful in valuation of securities and capital budgeting (Copeland, Shastri, & Weston, 2005). The arbitrage pricing theory holds that a linear function model of several market indices can be established where beta coefficients represent the sensitivity of each factor, which is a contradiction to CAL and CAPM (Brigham & Ehrhardt, 2008).

2.3 Capital Budgeting Practices and Performance

Capital budgeting involve selecting the most viable project from among the several proposals using a given criteria. Such proposed projects can include plant, building, research and development and other long-term venture that are sustainable (Steven M., 2003). Before a project is commissioned, its lifetime cash flows are assessed to determine whether the returns it will generate are sufficient enough to cover the costs. Fixed assets are among the long-term investments that firms engage in since their life spans beyond one year, therefore a detailed plan is required on how the expected cash flows will be spent (Hirschey, 2003). Capital budgeting therefore involves a systematic process through
which a firm’s capital assets are planned and controlled (Cherry, 1970). Capital budgeting is critical to any firm operating in a competitive environment because it enable such firms to utilize their wealth optimally by investing in projects that maximize shareholders’ wealth (Hermes, 2007).

The major concept underlying capital budgeting is wealth maximization. The shareholders wealth must be invested in projects that will maximize the value of the firm (Hermes, 2007). The financial metric in the capital budgeting is the cash flows rather than the accounting profit. This is because the accounting profit and its accruals and realization concepts measure the result of the accounting process (Dobbins and Pike, 1980).

Following the official recognition in 1973, the Matatu sector in Kenya has undergone tremendous growth. It competes with the public bus transport companies not only within towns, but also in medium and long-distance passenger transport in Kenya. The short-distance passenger traffic throughout Kenya is dominated by the Matatu operator services (Ogonda 1992).

There is a deficiency on empirical studies that address financial management aspects of Matatu sector in Kenya. Most research in Kenya with regard to Matatu sector have addressed the regulatory framework, working conditions, legal status and origin (Aduwo 1990; Kapila et al., 1982; Muchira et al., 1994). Chumba (2015) carried out a study on the factors affecting performance of family owned Matatu businesses in Nairobi and found out that management style, access to cheap credit and cost of operations have significant influence on the profitability and survival of such enterprises. Despite these studies there still remains several unanswered queries one of them is whether the sector employs capital budgeting Practices and procedures in evaluating their investments.
2.4 Capital Budgeting Techniques

Capital budgeting involve selecting the most viable project from among the several proposals using capital budgeting techniques. Some of the techniques make use of incremental cash flows while others do not (Seitz, 2005). The Net present value (NPV) technique calculates the present value of both the cash inflows and outflows and the difference between the two is the NPV of the project (Kurt & Daniel, 2003). A positive NPV means that the project is able to return its required rate of return and therefore accepted as viable. If the amount is negative, it cannot provide adequate returns and would be rejected. Internal rate of return (IRR) is the discounting rate for obtaining a zero NPV for a project. A positive NPV implies that the actual return is higher while negative NPV indicates that the actual return is lower (Berk, Johnathan, 2015). By constantly changing the discount rate it is possible to arrive at a discount where the NPV is zero. NPV generally rewards large profits because it is easier for them to generate large NPVs without having a high IRR. The PI adjusts for this by a simple change. When calculating NPV, the present value of the outflows is subtracted from the present value of the inflows giving the NPV (Kurt & Daniel, 2003). The profitability index is obtained by dividing the present value of the outflows into the present values of inflows. The project is acceptable when the calculated figure is greater than one. Payback Period is the time required for a project to recover its initial outlay (Williams J.R. et al, 2012).

2.5 The Cost of Capital

Cost of capital is a vital component in capital budgeting process. Each project that is proposed by the company has an estimated required rate of return. For a project to be considered for investment, the expected rate of return must exceed the cost of capital (Dybvig and Wang, 2002; and Gunasekaran, 2010). When designing employee compensation plans and bonuses, the cost of capital is vital because it’s a cost that must
be recovered from the returns generated (Ehrhardt, 1994). The importance of cost of capital finance is that it offers a benchmark through which investments are evaluated and top managers appraised. When making decisions on the source of capital to employ on a project, the cost of capital useful. Projects with a higher required rate of return must be funded with a relatively cheaper source of finance at any given time (Ehrhardt, 1994). A firm may have a number of securities that have claims on their assets. These claims could have different required rates of return. When an average of the various required rates of return are taken, it forms the cost of capital for the investors of that firm (Pandey, 2001). Determination of the various required rate of returns for the various securities is pure a function of the market. The market forces of demand and supply will set the equilibrium prices for each security. The equilibrium prices are subsequently used to determine the required rate of return as per this formula (Glen, 2008)

\[ I_0 = \frac{CF_1}{1+k} + \frac{CF_2}{(1+k)^2} + \cdots + \frac{CF_n}{(1+k)^n} \]

In this formula, \( I_0 \) represents the amount of capital by investors in period 0 and \( CF \) represent what the investor’s expected return, and \( k \) being the cost of capital.

Firms raise debt in a variety of ways. Borrowing can be done through financial institutions or public. Public deposits and debentures are the common forms of such borrowing for a given time and interest rate. The interest rate charged on borrowed funds is used to calculate the cost of debt (Pandey, 2001). At a given time firms will employ selected sources to finance projects. The average cost of capital for these sources forms the average cost of capital for the firm at this point in time (Frank, Murray; Shen and Tao, 2012).
2.6 Critique of the Existing Literature

Most of the research work in Kenya concerning on public transport and Matatu sector have concentrated on the regulations, working conditions for both workers and employees, among other challenges in the sector. Little literature exist on financial management and how it affects the general performance of this sector. Chitere and Kibua (2004), carried out a study on how regulatory framework affects Matatu sector. Their findings were that greatly contribute to the poor performance in public transport.

The major problem in Matatu business is cost. The cost of operations and cost of capital brought about by rising interest rates and the fluctuating cost of fuel and spare parts that are beyond the operator’s control (Aduwo, 1990). Despite the many researchers underlining the challenges affecting the sector, no precise undertaking pointing out to these challenges in a view to reducing these costs and carrying out proper financial budgeting practices to make the sector more profitable has been done (Aduwo, 1994).

The study aimed at investigate these challenges in-depth for Kisii County and perhaps some of the learning can be replicated elsewhere or open for more research in other settings.

2.7 Summary of the Chapter

Most of the research work in Kenya concerning on public transport and Matatu sector have concentrated on the regulations, working conditions for both workers and employees, among other challenges in the sector. Little literature exist on financial management and how it affects the general performance of this sector. Chitere and Kibua (2004), carried out a study on how regulatory framework affects Matatu sector. Their findings were that greatly contribute to the poor performance in public transport.

Fixed assets are among the long-term investments that firms engage in since their life spans beyond one year, therefore a detailed plan is required on how the expected cash
flows will be spent (Hirschey, 2003). Capital budgeting therefore involves a systematic process through which a firm’s capital assets are planned and controlled (Cherry, 1970). Capital budgeting is critical to any firm operating in a competitive environment because it enable such firms to utilize their wealth optimally by investing in projects that maximize shareholders’ wealth (Hermes, 2007).

Although some of these aspects have been in use in larger firms, the small firms including Matatu businesses are faced with the same problems. It is because of this that small firms have to apply some of them, if not all of them, in order to succeed. The available literature suggests that capital budgeting and capital structure in small business enterprises is deficient but no attempts have been made to document the existing trend other than just the conclusion without proper basis that small business enterprises do not practice financial planning (Chai, 2014).

### 2.8 Conceptual Framework

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital Budgeting Practices</strong></td>
<td>Performance of Matatu Business</td>
</tr>
<tr>
<td>Cost of operations</td>
<td></td>
</tr>
<tr>
<td>Cost of capital</td>
<td></td>
</tr>
<tr>
<td>Capital Budgeting Techniques</td>
<td></td>
</tr>
</tbody>
</table>

The conceptual frame indicates how capital budgeting practices work influence the returns of the Matatu business in Kisii County. Capital budgeting practices include; cost of capita, cost of operations, and capital budgeting techniques. The financial Performance
of Matatu business is affected by many factors but this study will focus on capital budgeting practices as illustrated in the figure above.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the tools and methods used by the researcher to collect valid and reliable data devoid of biases. The chapter addresses research design, sampling design and data analysis.

3.2 Research Design

This is an overall plan on how the researcher intend to conduct a study to solve a particular research problem (Churchill & Iacobucci, 2009; Bryman, 2008). The researcher used a cross section survey design to conduct the study. A cross sections study enables the researcher to capture data about a variable at a point in time (Rubin & Babbie, 2009). The study aimed to find out the effect of capital budgeting practices on the performance of Matatu business in Kisii County thus targeted current investors in Matatu business. In Kisii County most operators are individuals who are spread evenly across the county. The researcher settled on a survey design to carry out the interviews. The researcher preferred cross sectional survey because the study intends to capture the data about the performance of current Matatu businesses.

3.3 Target Population

The study population constituted all registered Matatu Saccos operating in Kisii County. The Saccos are made up of individual operators who are duly registered by particular Matatu Saccos. Kisii County has good road network that interconnects the whole county. Matatu businesses are fairly spread across the county and therefore samples picked at random can represent the views of the entire population without bias. There are 19 registered Saccos in Kisii County with about 600 registered active operators in Kisii County NTSA (2015).
3.4 Sample Design

The study adopted a stratified random sampling. Since the population comprised all registered Matatu Saccos in Kisii County, and all individuals investors belong to these Saccos, a sample of 10% of individual members from each Sacco was taken to represent the population. The researcher used a confidence level of 95% and picked at least 10% of the population as his sample. The sample size estimate is good enough for the study findings to be generalized (Mugenda & Mugenda, 2003).

Table 1: Sample Distribution

<table>
<thead>
<tr>
<th>SACCO NAME</th>
<th>No of Members</th>
<th>Sample Drawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMFORT SAFARIS SACCO</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td>FARASI TRAVELLERS SACCO LTD</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>FIVE STAR SERVICES SACCO</td>
<td>46</td>
<td>5</td>
</tr>
<tr>
<td>GUCHA TRAVELLERS SACCO LTD</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>KIENYA TRAVELLERS SACCO LTD</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>KIMISAHLINE TRAVELLERS SACCO LTD</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>KINYAMO TRANSPORTERS SACCO LTD</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>KINYANA TRAVELLERS SACCO</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>KOKE SACCO LTD</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>MANGA NISSAN TEAM SACCO LTD</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>MASABA LINE SERVICES SACCO LTD</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>NURU TRAVELLERS SACCO LTD</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>NYAMACHE TRANSPORT OPERATORS SACCO LTD</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>NYAMBUNWA MATATU SACCO LTD</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>NYANGENA MZALENDO SAFARIS SACCO LTD</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>SMART HIGHWAYS SACCO LTD</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>TRANSLINE SACCO LTD</td>
<td>55</td>
<td>5</td>
</tr>
<tr>
<td>WASAFIR TRAVELLERS SACCO LTD</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td>ZIONLINE SERVICES SACCO LTD</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>569</td>
<td>60</td>
</tr>
</tbody>
</table>

3.5 Data Collection

The researcher used quantitative data in this study. Collection of data was done by use of structured questionnaire, after which the data was coded and edited. Tables were used to summarize the data for presentation in graphs and charts (Mugenda & Mugenda, 2003).
Data from the questionnaires was coded and each variable analyzed by the help of SPSS software V 17.

Regression analysis was used to test the strength and relationship between variables in the model. The model was tested at 95% confidence level and 5% significance. Returns in Matatu business was regressed against three variables namely cost of capital, cost of operation, and capital budgeting Technique applied. The equation will be as follows:

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon, \]

Where;

\( Y = \) Returns
\( \beta_0 = \) constant (coefficient of intercept)
\( X_1 = \) Cost of capital
\( X_2 = \) Cost of Operation
\( X_3 = \) Capital budgeting Technique
\( \varepsilon = \) error term
\( \beta_1 \ldots \beta_3 = \) regression coefficients of Three variables.

In order to measure the predicting power of the model, ANOVA was used. The model predicted the influence of the three independent variables on the returns of Matatu business. The test of significance was done using the coefficient of determination \( R^2 \). The \( R^2 \) measures percentage change in the dependent variable that is explained by changes in the independent variables.

Coded data was presented in tables, and descriptive measures were used to reorganize and summarize the tabulated data. The reports generated were quantitative in nature and were presented using charts, graphs and tables (Kothari, 2006).

The validity of the research instruments were pre-tested through a pilot study in Kisii County, Kenya. The pilot study helped in the clarification of ambiguous areas.
Through the use of structured questionnaire the reliability of research instruments was tested. The study also used experts in the field and the research supervisors to test the consistency and accuracy of the research instrument.

3.6 Data Analysis

This involved the preparation of data collected into useful, clear and understandable information. Data analysis and processing involved coding, editing and tabulating. The data collected from the field was analyzed and processed into meaningful and relevant information guided by the objective of the study. The response from the questionnaire was accorded percentages to facilitate analysis. The (SPSS) version 17 was used to analyze the primary data. Qualitative data analysis was done by comparing findings with already known facts and conclusions were made depending on how the findings fitted to the research questions. Data was then presented in headings and raw data then transformed into information (Kothari, 2006). To better the understanding of the findings, the information was presented into percentages and tables with an analysis as discussed in chapter four.

A Regression analysis was used to test how capital budgeting Practices influence performance. The study employed the following model.

\[ \text{Return} = \alpha + \beta_1 \text{COC} + \beta_2 \text{COP} + \beta_3 \text{CBT} + \epsilon \]

Where

\( \text{COC} \) = Effect in shilling of Cost of Capital

\( \text{COP} \) = Effect in shilling of Operational costs

\( \text{CBT} \) = Effect in shilling of Capital Budgeting Techniques
CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

The purpose of this chapter is to analyze research findings, interpret and explain findings and finally present the findings. The purpose of the study was to find out the how capital budgeting practices affect the returns of Matatu business in Kisii County. The respondents were the owners of Matatu business in Kisii County.

A three section questionnaire was used for the purpose of collecting data form the respondents. The first section captured respondent’s demographic data, while the second and third sections captured operations costs, capital budgeting techniques and returns. The research findings were analyzed with the help of SPSS program and the results presented using tables and graphs. Descriptive measures and inferential statistic tools were used to interpret the findings. For descriptive interpretation, the mode and median were used while correlation and regression analyses were utilized for inferential interpretations.

4.2 Response Rate

Sixty questionnaires were issued to the respondents who are the owners of the Matatu businesses in Kisii County. Fifty of them were returned which represents eighty three percent response rate.

Table 2: Response Rate

<table>
<thead>
<tr>
<th>RESPONDENTS</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUCCESSFUL</td>
<td>50</td>
<td>83%</td>
</tr>
<tr>
<td>UNSUCCESSFUL</td>
<td>10</td>
<td>17%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Summary of Demographic Data
The researcher first classified the respondents into male or female. The male respondents formed the majority 90% and the female were 10%.

Table 3: The Respondent’s Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>45</td>
<td>90%</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Research data (2016)

The respondents were divided into those that operate 14 seaters and those that operate 11 seaters for the purpose of analysis, this categorization was considered necessary.

Table 4: Categorization of Respondents by Seating Capacity

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Seater</td>
<td>43</td>
<td>86%</td>
</tr>
<tr>
<td>11 Seater</td>
<td>7</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: Research data (2016)

Research findings in table 4 show that majority of the operators run 14 seater vehicles at 86% and the 11 seater are 14%.

Table 5: Occupation of Respondents other than Matatu Business

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Administrators</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Businessmen</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>Farmers</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>Formal Employment</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Lecturers</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Nurses</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>Teachers</td>
<td>11</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: Research data (2016)
The researcher also categorized the respondents on other engagements that they have other than Matatu business. Majority were businessmen at 38%, followed by teachers at 22% and farmers at 20%.

**Table 6: The Respondents Education Level**

<table>
<thead>
<tr>
<th></th>
<th>Primary</th>
<th>Secondary</th>
<th>Certificate</th>
<th>Diploma</th>
<th>Degree</th>
<th>Masters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>5</td>
<td>10</td>
<td>18</td>
<td>7</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Percentage</td>
<td>10%</td>
<td>20%</td>
<td>36%</td>
<td>14%</td>
<td>16%</td>
<td>4%</td>
</tr>
</tbody>
</table>

**Source: Research Data (2016)**

The respondents with certificates formed the majority at (36%). Those with secondary were (20%), graduate level was at 16%, Diploma at 14%, and primary formed 10%. Those with Masters were least presented with only 4%. The level of education was important in this study because those with higher education are expected to have some degree for financial literacy.

**4.3 Data Validity**

Data validity is used to describe how best an instrument measures what it ought to measure. Content validity pertains to the extent to which the instrument fully assess the construct of interest (Allen & Yen, 1979). There were various ways used to establish the validity of the data collected, and they included interviewer corroboration, as well as peer debriefing, and conformability to ensure that the overall goal of the process which was to provide findings that were authentic, and original is met.
4.4 Descriptive Analysis

4.4.1 Sources of Capital

Table 7: Summary of Sources of Financing

<table>
<thead>
<tr>
<th>Source of Finance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>Debt</td>
<td>17</td>
<td>34%</td>
</tr>
<tr>
<td>Equity and Debt</td>
<td>30</td>
<td>60%</td>
</tr>
</tbody>
</table>

Source: Research data (2016).

Table 7 illustrates some of the source of capital that Matatu operators employ. A combination of equity and debt had the highest rating at 60%, while debt and equity separately received had 34% and 6% respectively.

4.4.2 Capital Budgeting Techniques

Table 8 Application of Capital Budgeting Techniques

<table>
<thead>
<tr>
<th>Q13&amp;14</th>
<th>FREQ</th>
<th>PERCENT</th>
<th>CUMM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applying</td>
<td>22</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>PB</td>
<td>18</td>
<td>36%</td>
<td>80%</td>
</tr>
<tr>
<td>NPV</td>
<td>7</td>
<td>14%</td>
<td>94%</td>
</tr>
<tr>
<td>OTHERS</td>
<td>3</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research data (2016)

From the study, many operators do not apply the techniques given their level of knowledge and education. Most of the operators apply intuitive management skills to run businesses in this sector. Sometimes it works for them and sometimes it doesn’t. This is explained by the significant number of operators who have their businesses abandoned before in two years and below.

4.5 Correlation Analysis

Correlation analysis was carried out between the various costs that were investigated and returns. The results in Table 9 show that fuel and returns have a strong negative correlation.
This implies that when an increase in cost of fuel will reduce the returns with similar magnitude. Other costs which were negatively correlated with returns were Payments to government agencies and maintenance costs.

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>N</th>
<th>Correlation Coefficient.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel cost increases</td>
<td>48</td>
<td>-0.786</td>
<td>0.028</td>
</tr>
<tr>
<td>Oil, tires and other parts cost</td>
<td>46</td>
<td>0.215</td>
<td>0.13</td>
</tr>
<tr>
<td>Insurance cost</td>
<td>50</td>
<td>0.13</td>
<td>0.275</td>
</tr>
<tr>
<td>Bank interests</td>
<td>46</td>
<td>-0.293</td>
<td>0.048</td>
</tr>
<tr>
<td>Labor cost</td>
<td>49</td>
<td>0.314</td>
<td>0.034</td>
</tr>
<tr>
<td>Maintenance cost</td>
<td>48</td>
<td>-0.164</td>
<td>0.265</td>
</tr>
<tr>
<td>Payment to government agencies</td>
<td>50</td>
<td>-0.13</td>
<td>0.174</td>
</tr>
</tbody>
</table>

Source: Research data (2016)

4.6 Regression Analysis

Table 10: ANOVA Summary

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3</td>
<td>1.78428E+12</td>
<td>5.94758E+11</td>
<td>13.49008795</td>
<td>1.90931E-06</td>
</tr>
<tr>
<td>Residual</td>
<td>46</td>
<td>2.02807E+12</td>
<td>44088554546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>3.81235E+12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11: Regression Analysis Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Intercept</th>
<th>Standard Error</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>312249.1146</td>
<td>307224.8813</td>
<td>1.016353602</td>
<td>1.092</td>
</tr>
<tr>
<td>Cost of capital</td>
<td>4.782786155</td>
<td>1.348384875</td>
<td>3.547048209</td>
<td>0.019</td>
</tr>
<tr>
<td>Cost of Operations</td>
<td>-0.669635613</td>
<td>0.606611754</td>
<td>1.103894886</td>
<td>0.207</td>
</tr>
<tr>
<td>Capital Budgeting Tech</td>
<td>-13857.42502</td>
<td>32809.04295</td>
<td>0.422366024</td>
<td>0.0783</td>
</tr>
</tbody>
</table>

Source: Research data (2016)
A regression analysis was done and the results presented in Table 11. Independent variable were cost of capital, operational costs and capital budgeting techniques. The Returns were used as dependent variable representing performance of Matatu business. The aim was to determine the influence of the three variables on the returns. The results show that capital budgeting techniques do not influence the returns of Matatu business. This is be attributed to the fact that most operators do not apply capital budgeting techniques in appraising their investments, and those that use them do not apply them appropriately.

Table 12: Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.684</td>
<td>0.468</td>
<td>0.433</td>
<td>209972.35</td>
</tr>
</tbody>
</table>

Source: Research data (2016)

Table 12 shows a summary of the regression model used by the researcher, from the results R Square = 0.468. The interpretation of the results above is that 47% of the changes in Matatu are explained by the model. 53% is attributed to other variables that were not in the model.

4.7 Capital Budgeting Techniques
Capital budgeting techniques do not affect the returns Matatu business in Kisii County as per the results in table 11. The p-value is at 0.6 which is way above 0.05 significance level at 95% confidence level. This means that the probability that capital budgeting practices affect Matatu business in Kisii County is 60%. Most of the operators do not apply the techniques while those that apply them do it inappropriately. Proper application of capital budgeting techniques enables the firm to predict with some level of accuracy the cash flows by incorporating risk and probability.
The study results from Table 8 show that nearly half of the operators interviewed are unaware of the existence of capital budgeting techniques in evaluating their projects given their level of knowledge and education. 36% of those that are aware apply Payback period, while 14% use NPV Method to evaluate their investments. The study found that capital budgeting practices do not affect the returns of Matatu business in Kisii County. Onguso (2012) carried out a study on how Matatu business returns are influenced by financial management practices in Nakuru County. He found out that cost of capital and cost of operations greatly influence returns. Oira (2015) carried out a study on the challenges affecting investments in public transport in Nairobi and his conclusions were that regulations, cartels, access to capital, and profitability of the industry affected investments in the industry. Mwangi (2014) did a research on effects of budgetary planning tools and performance of registered public service vehicle companies in Kisii County Kenya. He found out that most companies have no idea on the existence of such tools and those that have an idea do not practice them, and that there is no significant performance differences between those that apply them and those that do not.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
In this chapter, recommendations and conclusions are drawn by the researcher based on the analysis results from data analysis in chapter Four. From the conclusions made, the researcher will suggest the areas that require further research so as to add and improve the body of knowledge in the field of study.

The researcher aimed to find out the influence of capital budgeting practices on performance of Matatu business in Kisii county.

Results showed that Capital Budgeting Techniques do not affect the returns Matatu business in Kisii County. The results in table 11 show a probability of 60% of proof that capital budgeting practices affecting the returns of matatu business in Kisii county at 95% confidence level. For the results to be accepted as significant, the p-value figure should be below 0.05.

5.2 Conclusions
The study sought to find out how capital budgeting practices influence the performance of Matatu business in Kisii county.

Capital budgeting decisions did not affect the performance of Matatu business in Kisii County. It emerged that most operators were unaware of this concept and those that were aware did not apply them correctly. This can be attributed to the level of education as depicted in Table 4 where majority of the operators were secondary and Certificate holders. Matatu business is a high risk venture and therefore requires one to evaluate it using the modern techniques in capital budgeting. From the results it is clear that Payback period is the most used techniques which does not take into account time value of money and the risks involved. This means that forecasting of cash flows was inaccurate since it
was not based on any mathematical model. The forecast did not take into account the risk and uncertainties that characterize this sector. Other factors such as the agency costs and operational costs do influence the performance of Matatu businesses in Kisii County.

5.3 Recommendations
After a thorough analysis that led to our conclusions, the study recommends the following with regard to capital budgeting practices by the operators in Kisii County. First, the Saccos should assist their members to access cheap credit from financial institutions through signing mutual agreements with financial institutions. The Saccos should also encourage their members to increase their savings in their respective Saccos or join other Saccos other than Matatu to enable them access loans at a cheaper rate.

The Saccos management should hire at least one financial expert to advice members on financial matters or conduct regular seminars on financial management matters. Capital budgeting is a complex process and from the study most operators do not understand it. Some of the major areas that operators require advice is on the risk identification and analysis and how to incorporate it in the forecasting of cash flows. Another area is on the application of capital budgeting techniques in evaluating their projects.

The returns in Matatu sector is mostly influenced by cost of operation, cost of capital among others. Such costs like police payments are significant and therefore affect the returns but need to be done away with. Saccos should ensure that their members fully comply with the set out regulations to avoid such costs. The Matatu Sacco management should ensure that the Matatu staff is well remunerated to reduce collusions that can lead to loss of revenues by the investors.
5.4 Limitations of Study

The Population was not easily accessed due to various reasons some including their mobility from one place to another. Most Matatu operators do not own offices as their vehicles are run by drivers and Sacco staff.

The Respondent were mostly reluctant to give away information about their returns and source of capital because they considered it sensitive. They were suspicious of the intent and usage of such information by the researcher. Most of the respondents were afraid of such information being used by tax and regulatory authorities against them.

Reliability of data obtained might be inaccurate due to the possibilities of respondents in the study misunderstanding some of the questions and terminologies used in the questionnaires by the researcher. The most affected area could be that on the capital budgeting techniques.

5.5 Suggestion for Further Study

Matatu business is a dynamic and complex sector and therefore no single study can adequately address all the issues in the sector. This study was on individual operators some of whom do not have the capacity to hire experts to run their business especially on financial matters. The researcher suggest that a study be done on the capital budgeting practices on the major bus companies in the public transport. Such study will be informative to the operators, policy makers, and researchers because it will shift focus from individual operators to established companies.
REFERENCES


Long Grove, IL: Waveland Press.

Akingo, P.O. (2004). The institutional and organizational structure of public road 

the city of Nairobi, Kenya. In: African Urban Quarterly, Vol7 (1) and (2)


NY: CBS College Publishing.

Leverage”, Strategic Management Journal, 14, 87-130


APPENDICES

Appendix I: Cover Letter

I am a Student at the University of Nairobi carrying out a research on Capital Budgeting practices and performance of Matatu business in Kisii County.
You have been randomly selected to participate in this study. This study is for academic purposes only and the information provided is confidential since No individual responses will be revealed. Your participation by promptly completing the enclosed questionnaire and returning it directly to me would be greatly appreciated.

Mochge Walter Zakkies
Appendix ii: Letter of Authority

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
KISUMU CAMPUS

Ref: CHSS-SOB D61/77402/2015
September 26, 2016

TO WHOM IT MAY CONCERN

The bearer of this letter Zakkies Mochoge Walter

REGISTRATION NO: D61/77402/2015

The above named student is in the Master of Business Administration Degree Program. As part of requirements for the course, he is expected to carry out a study on “Capital budgeting practices and performance of matatu business in Kisii County, Kenya”. He has identified your organization for that purpose. This is to kindly request your assistance to enable him complete the study.

The exercise is strictly for academic purposes and a copy of the final paper will be availed to your organization on request.

Your assistance will be greatly appreciated, thanking you in advance.

Sincerely,

DR. NIXON OMORO
ASST. COORDINATOR, SOB, KISUMU CAMPUS

Cc. File Copy

ISO 9001:2008
The Fountain of Knowledge
Providing leadership in academic excellence
Appendix iii: List of Registered Saccos In Kisii County

<table>
<thead>
<tr>
<th></th>
<th>Name of Sacco</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COMFORT SAFARIS SACCO</td>
</tr>
<tr>
<td>2</td>
<td>FARASI TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>3</td>
<td>FIVE STAR SERVICES SACCO</td>
</tr>
<tr>
<td>4</td>
<td>GUCHA TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>5</td>
<td>KIENYA TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>6</td>
<td>KIMISAHLINE TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>7</td>
<td>KINYAMO TRANSPORTERS SACCO LTD</td>
</tr>
<tr>
<td>8</td>
<td>KINYANA TRAVELLERS SACCO</td>
</tr>
<tr>
<td>9</td>
<td>KOKE SACCO LTD</td>
</tr>
<tr>
<td>10</td>
<td>MANGA NISSAN TEAM SACCO LTD</td>
</tr>
<tr>
<td>11</td>
<td>MASABA LINE SERVICES SACCO LTD</td>
</tr>
<tr>
<td>12</td>
<td>NURU TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>13</td>
<td>NYAMACHE TRANSPORT OPERATORS SACCO LTD</td>
</tr>
<tr>
<td>14</td>
<td>NYAMBUNWA MATATU SACCO LTD</td>
</tr>
<tr>
<td>15</td>
<td>NYANGENA MZALENDO SAFARIS SACCO LTD</td>
</tr>
<tr>
<td>16</td>
<td>SMART HIGHWAYS SACCO LTD</td>
</tr>
<tr>
<td>17</td>
<td>TRANSLINE SACCO LTD</td>
</tr>
<tr>
<td>18</td>
<td>WASAFIR TRAVELLERS SACCO LTD</td>
</tr>
<tr>
<td>19</td>
<td>ZIONLINE SERVICES SACCO LTD</td>
</tr>
</tbody>
</table>
Appendix IV: Research Questionnaire

MATATU OWNER’S QUESTIONNAIRE

I am a student at the University of Nairobi carrying out a research on Capital Budgeting practices and performance of Matatu business in Kisii County.

You have been randomly selected to participate in this study. This study is for academic purposes only and the information provided is confidential since No individual responses will be revealed. Your participation by promptly completing the enclosed questionnaire and returning it directly to me would be greatly appreciated.

Kindly do not write your Name on the questionnaire

Please Mark (✓) in the boxes as appropriate unless otherwise indicated.

A. BACKGROUND INFORMATION

1. Name of Sacco you operate in……………………………………

2. Sex Male □ Female □

3. Level of Education:
   (a) Basic Education
      Primary [ ] Secondary [ ]
   (b) Higher Education
      Certificate [ ] Diploma [ ] First Degree [ ] Master Degree [ ]

   Others (Specify)………………………………………………………………

4. what else do you do beside matatu business…………………………

5. Number of matatus operated……………………………………………

6. Number of Years in Operation
   Less 1 Year [ ]
   1-2 Years [ ]
   3-5 Years [ ]
7. Type of insurance: Third party [ ] Comprehensive [ ]

SECTION B: COST OF OPERATIONS

What is your expenditure on insurance per year?

<table>
<thead>
<tr>
<th>Below Kshs</th>
<th>5,000</th>
<th>10,000</th>
<th>15,000</th>
<th>20,000</th>
<th>And above</th>
</tr>
</thead>
</table>

8. What amount do you spend on fuel per day?
   - Below 3000 [ ]
   - 3000 - 6000 [ ]
   - 6000 - 9000 [ ]
   - 9000 - 12000 [ ]
   - Over 12,000 [ ]

9. What amount do you pay for insurance policy per year?
   - Below 30,000 [ ]
   - 30,000 – 50,000 [ ]
   - 50,000 – 75,000 [ ]
   - Above 90,000 [ ]

10. What amount do you spend on servicing the matatu per month?
    - Below 5,000 [ ]
    - 5,000 – 10,000 [ ]
    - 10,000 – 15,000 [ ]
    - Above 15,000 [ ]
11. Salary of the Driver per month?

<table>
<thead>
<tr>
<th>Below 20,000</th>
<th>20,000 – 30,000</th>
<th>Above 30,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

How much do pay for local authorities and other government agencies per year?

<table>
<thead>
<tr>
<th>Below Kshs 5,000</th>
<th>5,000 - 10,000</th>
<th>10,000 - 15,000</th>
<th>15,000 - 20,000</th>
<th>20,000 And above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION C: COST OF CAPITAL**

12. What was the source of financing for your matatu?

- Debt [ ]
- Equity [ ]
- Debt and Equity [ ]

If through Debt, kindly indicate the interest rate charged?

- Less than 15% [ ]
- 15% - 20% [ ]
- 20% - 25% [ ]
- 25% - 30% [ ]
- Above 30% [ ]

**SECTION C: CAPITAL BUDGETING TECHNIQUES**

13. Did you employ capital budgeting techniques to evaluate your capital expenditure?

Yes [ ] No [ ]

14. If yes, indicate which of the following capital budgeting techniques you employed?

- Payback Period (PB) [ ]
- Net Present Value (NPV) [ ]
15. What is the least amount recorded per day by the business?

<table>
<thead>
<tr>
<th>Below Kshs.</th>
<th>2,000 - 5,000</th>
<th>5,000 - 8,000</th>
<th>8,000 - 10,000</th>
<th>10,000 And above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. What is the least amount recorded per day by the business?

<table>
<thead>
<tr>
<th>Below Kshs.</th>
<th>2,000 - 5,000</th>
<th>5,000 - 8,000</th>
<th>8,000 - 10,000</th>
<th>10,000 And above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. What was the initial amount that you invested in the business?

<table>
<thead>
<tr>
<th>Less 500,000</th>
<th>500,000 – 1000,000</th>
<th>1000,000 – 1500,000</th>
<th>1500,000 – 2000,000</th>
<th>2000,000 – 2500,000</th>
<th>Above 2500,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Thank you very much for time and cooperation*
# Appendix V: Originality Report

## CAPITAL BUDGETING PRACTICES AND PERFORMANCE OF MATATU BUSINESS IN KISII COUNTY, KENYA

### ORIGINALITY REPORT

<table>
<thead>
<tr>
<th>%</th>
<th>SIMILARITY INDEX</th>
<th>%</th>
<th>INTERNET SOURCES</th>
<th>%</th>
<th>PUBLICATIONS</th>
<th>%</th>
<th>STUDENT PAPERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td></td>
<td>12</td>
<td></td>
<td>3</td>
<td></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

### PRIMARY SOURCES

<table>
<thead>
<tr>
<th>1</th>
<th>chss.uonbi.ac.ke</th>
<th>% 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>41.89.99.18</td>
<td>% 1</td>
</tr>
<tr>
<td>3</td>
<td>errepository.uonbi.ac.ke</td>
<td>% 1</td>
</tr>
<tr>
<td>4</td>
<td><a href="http://www.cbu.edu">www.cbu.edu</a></td>
<td>% 1</td>
</tr>
<tr>
<td>5</td>
<td>Mohammadi, Vahid</td>
<td>% 1</td>
</tr>
<tr>
<td>7</td>
<td><a href="http://www.dpmf.org">www.dpmf.org</a></td>
<td>%&lt;1</td>
</tr>
<tr>
<td>8</td>
<td>softkenya.com</td>
<td></td>
</tr>
</tbody>
</table>