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**AN ANALYSIS OF THE INFRASTRUCTURE FUNDING GAP OF PARASTATALS
IN ZIMBABWE: A CASE STUDY OF ZESA**

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VISITING SCHOOL

**A Research Submitted to the Midlands State University in Partial fulfillment of the
requirements for the Bachelor of Accounting Honours Degree**

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2014



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**MIDLANDS STATE UNIVERSITY
FACULTY OF COMMERCE
DEPARTMENT OF ACCOUNTING**

APPROVAL FORM

The undersigned give their certification on reading and recommending to the Midlands State University for acceptance: a research project entitled, **“An Analysis of the Infrastructure Funding Gap of Parastatals in Zimbabwe: A Case of the Zimbabwe Electricity Supply Authority,”** submitted by **Rudo Margaret Kunaka (R11380B)** as partial fulfilment of the requirements of Bachelor of Commerce Accounting Honours Degree (HACC) with Midlands State University.

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RELEASE FORM

Name of Student : Rudo Margaret Kunaka

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Dedication

This research is dedicated to my late father Mr C. Kunaka who was my role model and inspiration in going an extra mile towards success and achievement.

ABSTRACT

This study sought to analyse the Infrastructure Funding Gap of Parastatals in Zimbabwe: A Case of the Zimbabwe Electricity Supply Authority. The research seeks to analyze the barriers to attracting investment, critically analyzing the effects of return on capital, poor debt management shown by the high debt to equity ratio and the tariffs as hindrance to the attainment of its goals and objectives. Literature review was used to conduct and informs the researcher of the influential researchers and research groups in the topic of electricity shortage and how it affects on productivity. Both case study method and descriptive survey design were utilized and latitudinal data was collected from a sample of 31 employees which consisted of 4 Executive managers, 8 operational managers and 19 non-managerial staff. The researcher used judgmental sampling method. Data was collected using questionnaires and interviews. 11 questionnaires were distributed and all were completed which showed 100% response rate. The data was analysed and well presented on through tables, graphs and pie charts. The results indicated that infrastructure funding gaps were severe and a 100% response rate was recorded. Government is not injecting budget in parastatals to sustain its growth on infrastructure development. The results indicated that ZESA faces significant capital shortage and financing constraint, given the record of economic instability and poor credit-worthiness. Many infrastructure investments that are critical for economic recovery and poverty reduction would remain under-financed into the long-term. The research study recommended that the government should increase investments in electricity generation and should not concentrate on maintaining current power generation infrastructure but should explore building new infrastructure to increase its installed capacity and amount of power generated. ZESA Holdings should strictly adhere to load shedding schedules. ZESA Holdings should exclude manufacturing firms from load shedding at the expense of other consumers. Also recommended were strategies and policies to upgrade and modernize infrastructure, including possibilities of attracting investment.

A further research finding was recommended to assess the infrastructure development of ZESA and strategies its investment attraction.

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CHAPTER I

INTRODUCTION

1.0 Introduction

This chapter describes an Analysis of the Infrastructure Funding Gap of Parastatals in Zimbabwe, a case of the Zimbabwe Electricity Supply Authority in a bid to improve its generation and distribution capacity. The purpose of this chapter is to present the research problem, to explain the underlying principle for conducting this research as well as highlight the rationale and scope of this research.

1.1 Background to the study

The Zimbabwe Electricity Supply Authority, a government controlled parastatal, is currently generating 1360 MW of electricity against a peak demand of 2200 MW, resulting in 800 MW shortfalls. The utility imports electricity in a bid to meet its demand. An efficient and reliable supply of electricity is seen as critical to economic recovery (The Chronicle 12 June, 2014). In the 2013 Annual Report by the Chief Executive Officer (Engineer Chifamba) indicated that ZESA is facing challenges of; unavailability of lines of credit to meet its operational requirements and embark on new expansion projects, high borrowing costs ranging between 15% and 25% and lack of meaningful investment. ZESA's debt to equity ratio in 2011, 2012 and 2013 has been fluctuating between 1.94:1 and 3.37:1 due to high balances on total debt and high borrowing costs. The current liabilities had a huge balance comprising of the current portion of long-term legacy loans still outstanding and electricity imports which fall due on a daily basis. (2013 Annual Financial Report).

Table 1.1 EXTRACT OF ZESA’S STATEMENT OF FINANCIAL POSITION

	\$	(000)	
	2011	2012	2013
TOTAL ASSETS	14 36 000	1 391 019	1 429 932
EQUITY AND LIABILITIES			
TOTAL EQUITY	320 000	227 000	312 500
TOTAL DEBT	622 898	766 494	636 892
TOTAL EQUITY & LIABILITIES	1436 000	1 391 019	1 429 932
Electricity operating costs/ cents per kwh	7.53	9.86	9.86
Debt Equity ratio	1.94	3.37	2.04

Annual Financial Report 2013and 2012

According to the Zimbabwe Energy Regulatory Authority (ZERA)’s consultancy (NorConsult Africa) the return on capital recognized by ZESA of 8.5% is insignificant to cater for the refurbishment of existing infrastructure and it should be revised to 20%. ZESA adopted a rate of return on capital of 8.5 % basing on the Zimbabwe Energy Regulatory Commission’s Electricity Act (Chapter13.23). This has substantially reduced ZESA’s revenue requirements and resulted in inefficiencies.

Although the utility has managed to secure a loan with the Chinese government of \$318 million to expand its Kariba Hydro project, this falls considerably short of the financial requirements of ZESA estimated around \$3 billion (S K. Moyo at the 3rd Annual Zimbabwe Pension Funds Forum). ZESA has failed to secure funds to expand new power generation projects such as the Hwange PowerStation expansion, Batoka gorge project and Gairezi Power project.

Table 1.2 ZESA POWER GENERATION PROJECTS

PROJECT	REQUIRED FUNDS	FUNDING SOURCED	OUTSTANDING FUNDING
Kariba South Extension	\$513 million	\$355 million	\$158 million
Batoka gorge	\$1.4 billion	NIL	\$1.4 billion
Hwange Expansion	\$1.5 billion	NIL	\$1.5 billion
Gairezi Hydro	\$110 million	NIL	\$110 million
Total Investment required			\$3.168 billion

Source-Accumulated data from ZPC website and bulletins 2013 (12.47pm 15/09/2014)

The Infrastructure Development Bank in Zimbabwe (IDBZ) established through an Act of Parliament Chapter 24:14 with a mandate to focus on long term infrastructure finance and development has only managed to secure \$50 million loan for ZESA. This is practically insufficient to the utility which currently requires \$3 billion to finance its expansion programmes. IDBZ has failed to get significant loans from international banks as a result of a legacy debt of \$38 million (The Financial Gazette 3, October 2013). Infrastructural development is completed over a long period of time and as such the power utility requires long term affordable loans to be in a position to operate efficiently and effectively. ZESA CEO, Engineer Chifamba highlighted to the parliamentarian portfolio committee on Mines and Energy that it is working on securitizing its debtors for a loan of \$150 million with local financial institutions (Newsday 15 July, 2014).

In addition ZESA's bid to increase its tariff was declined by the Zimbabwe Energy Regulatory Authority (The Herald 1 August 2014).The current ZESA tariff has been sighted to be sub-optimal and repulsive to potential partners and independent producers. Banks may not be forthcoming to give ZESA loans citing an inability to payback based on the tariffs that are not cost reflective. The current ZESA tariff is 9.86 cents and its break-even tariff is pegged at 10.51 cents showing a variance of 10.36 % (Nor consult, 2013).Getting more money for ZESA to increase its output will not solve the problem of profitability as there are other indicators that also need to be made to boost investor confidence.

1.2 Statement of the problem

Despite the viability of the electricity industry and the lucrative projects the utility has at hand, investors have not been forthcoming. The research seeks to analyze the barriers to attracting investment, critically analyzing the effects of return on capital, poor debt

management shown by the high debt to equity ratio and the tariffs as hindrance to the attainment of its goals and objectives.

1.3 Research objectives

The main objective is to assess the unavailability of lines of credit to enable the company to meet its operational requirements and embark on new and expansion projects.

- To conduct the overall analysis of the effects of lack of meaningful investment in ZESA
- To establish difficulties faced by ZESA in an effort to access funds from available sources.
- To identify the impact of tariffs on investments
- To identify interim and long-term solutions for financial constraints

1.4 Research Questions

The aim of the research was to provide answers to the following questions:

- What are the effects of lack of meaningful investment in ZESA?
- What are the available sources for long term investment and the accessibility of these resources to ZESA?
- What is the impact of tariffs on investments?
- What are interim and long-term solutions for lack of investment to ZESA and other parastatals?

1.5 Significance of the Study

The study is important to the researcher, Midlands State University, ZESA and the government of Zimbabwe.

1.5.1 To the researcher

The research is expected to assist the researcher in partial fulfillment of a Bachelor's degree in Accounting. The research will also enhance the researcher's ability to understand and propose solutions to ZESA's lack of funding.

1.5.2 To Midlands State University

The research is of importance to MSU students for future studies.

1.5.3 To the organization

The student intends to produce a piece of research that will be a reference point to the power utility in attracting investment for refurbishment of existing infrastructure and new power projects.

1.6 Limitations of the Study

It is must be noted that there are factors that affected the researcher's ability to conduct the research as planned. These include:

1. Time constraint - the researcher had limited time to carry out the research, but overcame the constraint by giving maximum possible effort and time to the research.
2. Finance constraint – inadequate funding which was necessary to make the project a success affected the results of the study. The researcher overcame the constraint by sourcing for funds from friends and relatives.
3. Confidentiality – the management and staff at ZESA were not forthcoming with information, considering the strategic position of the company and the confidentiality of the information required in the study.

1.7 Definition of terms

Financial inclusion - offering of financial services to everyone despite background. Financial inclusion works hand in hand with social inclusion

Long-term marginal costs- a costing method presumed to cover costs and contribute to asset values

Investment – an item purchased with the hope of appreciating its value in the future

Securitizing- collateralized mortgage obligation

Cost drivers- a unit of activity that causes a change in the activity's cost.

1.8 Summary

The chapter introduces the researcher's topic and clearly highlights why the researcher chose to research on this topic, highlighting the problem at hand, the objective and significance of the study. The next chapter focuses on reviewing secondary information, necessary in carrying out the research.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

Zimbabwe's power sector, ZESA, faces even greater challenges than other countries in the SADC region. Even with the 1.13 percent economic growth from the previous year it has failed to meet its demand. The increase in electricity demand in many parts of the world has been largely attributed to the rapid rise in activity in a number of sectors including mining, agriculture and manufacturing. In Zimbabwe, the manufacturing sector contributed a total of 15 per cent towards the country's Gross Domestic Product (Industrial Development Policy 2012-2016 - Tetrad, 2012). Most parts of the world including the entire Southern African region have been experiencing power deficits (Chirwa and Sinyangwe, 2008). This chapter will dwell on the investigation of infrastructure funding gap in emerging markets, review challenges faced by emerging markets in attracting investment and the regulatory and legal framework surrounding infrastructure funding. It will also explain the purpose of literature review and clearly highlight the various sources of literature used.

2.1 Definition of literature review

Shuttleworth (2009) and Taylor (2013) define literature review as a critical and in depth evaluation of previous research. It is a summary and synopsis of a particular area of research that allows anybody reading the dissertation to establish why the researcher is pursuing this particular research program.

2.2 Electricity deficit experience in Southern Africa

The Southern African Power Pool (SAPP) coordinates electricity generation, distribution and consumption in the Southern African region. SAPP was formed with the aim to provide reliable and economical electricity in consistency to acceptable utilization of natural resources. Its membership is currently composed of:

Eskom of South Africa, Zimbabwe Electricity Supply Authority Holdings (ZESA Holdings), Nampower of Namibia, Societe National d'Electricite (SNEL) of Democratic Republic of

Congo, Tanzania Electric Supply Company (TANESCO), Empresa Nacional de Electricidade (ENEL) of Angola, Electricidade de Mozambique (EDM) of Mozambique, Lesotho Electricity Corporation (LEC), Botswana Power Corporation (BPC), Swaziland Electricity Board (SEB) and ZESCO of Zambia

SAPP noted that installed capacity in member countries of SAPP was about 53 000MW, but available capacity was 45 000MW due to technical limitations. The peak demand in 2012 was 42 000MW resulting in massive load shedding in some extensive parts of the region (Chirwa and Sinyangwe, 2012). The rise in regional power demand has been attributed to economic expansion in SADC member states requiring more power to supply new industries, increase in the population of most member countries, non-economic tariffs that do not support re-investment in power generation as well as insignificant capital injection into generation and transmission projects from either the private or public sectors. SAPP noted a mismatch in investment and demand for electricity resulting in huge deficits of power supply (African Business, 2006).

In efforts to address the power deficit the SADC member state is working on formulating and implementing a Power Conservation Plan basing on experience from California. The SADC region planned to spend US 7.88 billion on short-term projects and US \$32 billion on longer-term projects (Sothorn African Research and Documentation Centre). A major development was the transfer of ownership of the Cabora Bassa Dam to Mozambique from its former colonial power Portugal. Another long-term project is the Inga Falls power project for WESTCOR (DRC).

Despite the recognition of these projects, no action has been taken to fully implement the plans.

2.3 Effects of lack of meaningful investment.

There is a strong relationship between electricity supply and a country's real GDP (Energy Policy, 2009). In South Africa power shortages contributed to a slowdown in the growth of its economy from 5.3% to an annualized 2.1% (www.shangaidaily.com 01/10/14 13:23:04). ESKOM Holdings Ltd, the state owned power utility, cut electricity supplies, forcing the

Anglo Platinum Holdings Ltd, to close its operations for four days and this resulted in the devaluation of the Rand, and a fall in mining output by 22.1 percent (Stats SA, 2008).

The Zimbabwean economy has, in recent years, suffered considerably due to power shortages resulting in load shedding. Industry is currently not operating at full throttle because factories spend a considerable time period without power. Sable Chemicals, a fertilizer producer, company has closed down ten electrolysis units because ZESA is not supplying enough electricity (Newsday, 25 August, 2014).Price Waterhouse Coopers (2014) has observed that most of the investment in emerging markets is channeled towards mining resources and industrial manufacturing and far lower proportion invested in infrastructure that drives economic growth. Minimal or lack of meaningful funding has been attributed to inefficiencies in most parastatals affecting the real gross domestic product.

2.4 Risks in investing in Emerging markets

Policy risk: According to the Chifor (2009), developing countries were characterized by volatile political systems which have seen international investors having their funds expropriated in the 1980s. They have since abandoned this system, and adopted regulatory controls through which more value can be extracted from foreign enterprises, using the more subtle instrument of regulatory control rather than outright seizures. Weak legal and regulatory frameworks block investments in both capital and expertise. Participants in the market need to be comfortable that they will be treated fairly and, that their investments are secure (Rathbone, 2009).

Taxation and agency risk: In many cases investors are envisaged in ever changing tax laws as a result of reviews of country budgets and monetary policies. Investors have been skeptical on making decisions to invest basing on the tax implications. Governments are advised to come up with tax systems that influence the relative attractiveness of a jurisdiction (Mitchell, 2011).

2.5 Electricity challenges in the Middle East which hampers investors

2.5.1 The Case of India

A situation report by the World Bank electricity of shortages in India observed that the majority of manufacturing companies named poor electricity supply as their barrier to growth. Their managers highlighted the importance of power to other economic barriers such as taxation, credit, human capital and regulations (World Bank, 2013).

The empirical analysis is of a large textile manufacturing industry in Gurajat and Maharashtra (Bloom et al, 2013). The survey estimates the effects of investment in electricity. When power cuts were severe the manufacturing company purchased more of energy - intensive inputs Fisher, Van den, Mansur and Wang (2013). The report concluded that one of the potential contributors to the large productivity gaps in developing countries is low infrastructure quality.

The World Bank mining specialist Martin Lokanc to Zimbabwe said lack of efficient energy supply was affecting the performance of the industry.” (The Zimbabwean Mail, March 24, 2014).The upswing in economic activity in Zimbabwe has led to increased demand for electricity to drive production and other related processes. The deficit in turn poses a big threat to economic activity and consequently economic development. It also poses risk of reversing all the economic gains made thus far by negatively impacting on firm productivity and profitability.

2.6 Regulation of the Electric Power Sector

2.6.1 Current Arrangements for Regulation of Electricity Services

Institutional arrangements. The Electricity Act of 2002 provided for the creation of the Zimbabwe Electricity Regulatory Commission (ZERC) as the regulatory body for the electricity sector. The Commission became operational in 2005. ZERC was superseded by the Zimbabwe Energy Regulatory Authority created in September 2011 following promulgation of the Energy Regulatory Act Chapter (13:23) expected to promote the efficient provision of safe, secure and reliable electricity, promote competition as well as private sector participation in service provision.

Although the regulatory provisions state that ZERA must be independent, it is under the direct control of the Minister of Energy and Power Development. As a result, there is overlap between the regulatory roles of ZERA and the Minister. The Electricity Act (Chapter 5:35) gives the Minister of Energy and Power Development the authority to issue regulations on many aspects related to the power sector.

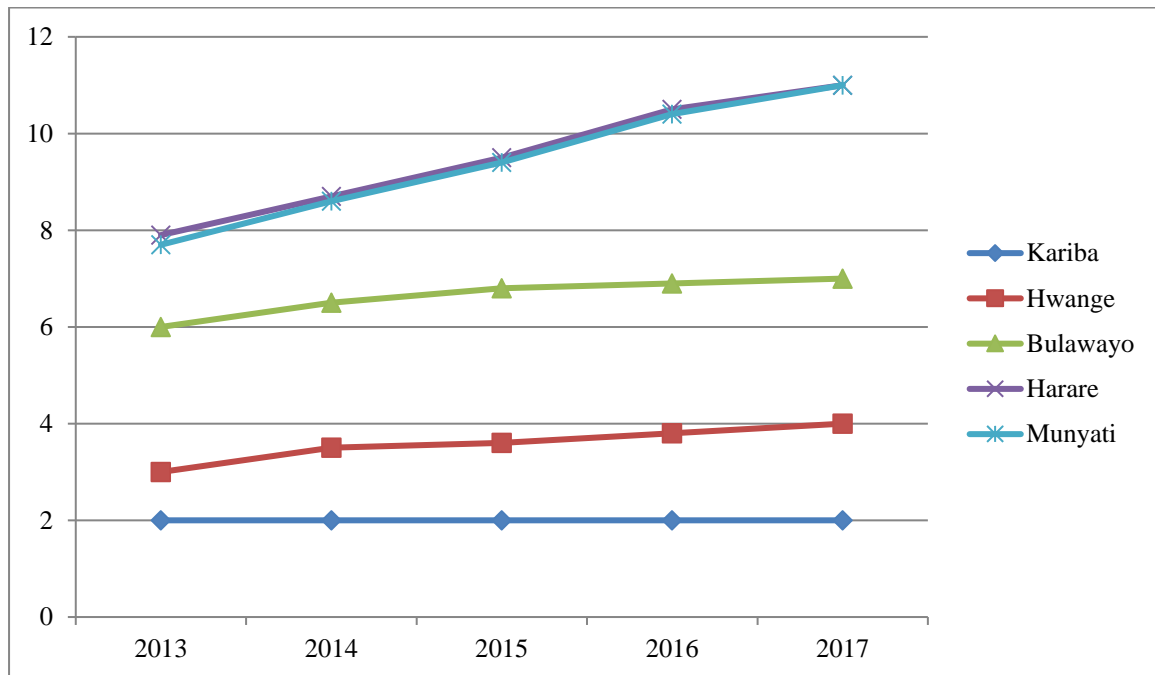
The absence of a comprehensive set of regulations hampers ZERA from performing its duties. The ability of ZERA to discharge its responsibilities effectively has also been limited by human resource constraints, and in particular the absence of independent regulatory professionals in the country and lack of operational autonomy (MISA Zimbabwe, 2011).

Competition and market power. ZERA oversees whether electricity services are provided competitively and determines whether a service with fixed price can be provided competitively in which case, ZERA may deregulate it, subject to the approval of the Minister of Energy and Power Development.

Also, ZERA has authority to monitor electricity markets to determine the presence of dominant market power in which case, it may issue cease and desist orders, levy monetary penalties (in concurrence with the Competition and Tariff Commission), or refer the matter to the Competition and Tariff Commission for investigation (Competition and Market Power PART X of the Electricity Act).

The wholesale price paid from ZETDC to ZPC is low (lower than the average import cost). For ZESA Holdings, this is an internal transfer from one unit to another; for a private generator it results in a price that does not cover its costs; Miller 2011 stated that the African Tax Administration Forum (ATAF) has identified transfer pricing as being a key potential loss of revenue for the African continent and there are a number of issues surrounding the complexity of transfer pricing.

ZPC Generation Cost of Sales



Source: Norconsult Africa 2013

Fig 2.1 ZPC Generation Cost of Sales

The cost of sales for ZPC does not include operating and maintenance costs and administration and overhead costs. Basing on the above statistics the average unit price is US6.5cents/ kwh against a transfer price of US5.16 resulting in a negative variance of 26 % (ZERA, 2014).

The return on capital recognized by ZERC was 8.5 percent, which is lower than the return used by other regulators in Zimbabwe and likely to be below the opportunity cost of capital in the country and ZPC and ZETDC have adopted the ROR which has directly impacted on its costs. ZERA has recommended that the power utility should recognize a rate of return of 20% to ensure efficient operations. (ZERA, 2013 Norconsult). Despite acknowledging discrepancies in the costing criterion for ZESA, the Energy Regulatory Authority has declined an application for a tariff increase basing on submissions by the government, consumer groups as well as customers in mining, agriculture and the productive sectors and in consideration of the macro- economic conditions in the country.

Regulation of power tariffs. The regulator is also responsible for setting tariffs. ZERA is responsible for defining the pricing methodology and sets prices and tariffs (after consultation with the Minister of Energy and Power Development) (Electricity Act Chapter 6:53). Currently, under the tariff schedule, marginal rates increase with volumes; this design aims to discourage consumption.

Formally, tariffs are to be set on a cost-plus principle. However, they are being revised once a year to cover budget costs and capital expenditures partially, with an 8.5 percent rate of return. All components of the tariff, including the price of the electricity, are revised and approved at the same time because there is no need to distinguish between the cost components of generation and those of transmission and distribution at the present time.

According to the regulatory framework, tariffs across categories should be set to phase out or substantially reduce cross-subsidies, while allowing for lifeline tariffs for some customers and subsidies under the Rural Electrification Fund. However, there is resistance to tariff increases that would impact adversely on consumers. As a result, the average tariff is low compared to domestic estimates of costs. In 2009, the average end-user tariff for ZESA was 6.5 US cents per kWh, while ZERC estimated the economic cost to provide the service at 9.8 US cents per kWh. Subsequently, price adjustments were made to bring the average price to about 7.5 US cents a kWh in 2010. Rough estimates put the generation cost of a new thermal plant based on coal (excluding the environmental cost) in the range of 12 to 15 US cents per kWh. The average residential consumer should therefore have paid a higher price than the average of 6.5 cents that prevailed in 2009. Tariffs in other parts of the region range between 8 and 12 US cents a kWh. The implication is that the present economic signals to potential private investors in power generation in Zimbabwe are poor (Mangwengwende, 2008).

2.6.2 Measures to Strengthen the Regulatory Environment

The Government is currently drafting a new Bill that comprehends the functions of the Zimbabwe Energy Regulatory Authority. A key issue going forward is the extent to which the current regulatory arrangements for the electric power sector will be carried forward into the operations of the new Authority and whether these regulations will be seen as adequate by potential investors in new generation capacity under IPP arrangements or in additional transmission capacity that can facilitate wheeling of power across Zimbabwe (NEP, 2012).

The position taken in this Report is that establishment of independent regulator for the electric power sector is essential to ensure a level playing field to attract investment. The current overlap between the Minister and ZERA in regulating the electricity system and market should be minimized. In this regard, a particular concern about the current draft of the Bill is the degree to which the Authority will have autonomy as an independent regulator.

In the case of the Energy Regulatory Board of Zambia, for example, the Regulator reports to the Parliament which gives it autonomy to play a fair arbitrator role in conflict resolution in the sector. Another option might be the establishment of a Tribunal which looks into conflicts that might arise between the Authority and the MEPD. This mechanism is used in Tanzania and Kenya, which have similar institutional arrangements (ERB Act Cap 436).

There are several other aspects of the existing regulatory framework for electric power that need to be reviewed in the course of preparing the new Bill. These include the following:

- Transmission operators are currently able to mix physical and commercial operations (trades bulk energy), thereby creating a risk of double-sided monopoly. It is better to separate physical operation of the transmission system from its commercial aspects, with the latter left to traders and distributors;
- The existing framework, which requires the primary distribution company to be default provider, raises the risk of the operator; for example, the entry of traders or other distributors may result in the primary distributor being left with insufficient funds to finance operation and expansion(The Financial Gazette 31 October,2013).

A revision of energy price and distribution margins to cost-reflective levels may facilitate entry of private investors in the medium-term. The agency should be ready to refine the operational rules for the generation segment (dispatch, pricing). The possibility of writing the details of power supply agreements into a license may be an example of reducing opportunistic risk-taking by the dominant public firm if private generation of electricity increases. In addition the focus should be on reforming those state-owned power utilities that are not performing adequately. This involves a comprehensive remodeling exercise, including making changes to the prevailing policies and regulations to permit private sector investment and competition where possible.

2.7 Tariffs and subsidies

One of the most important issues in electricity supply is the setting of the tariff. In view of the problems experienced by utilities in developing countries, Mangwengwende, 2008 noted, already in Zimbabwe, the finding of a study carried out by Cavers and Nelson(2009:306) for the International Bank for Reconstruction and Development and the United Nations Economic Commission for Latin America “.... the evidence accumulated by the study points to the need to adjust charges for electricity services, whether public or private, so that costs can be fully met and surpluses accumulated from earnings to finance future expansions”.

Cavers and Nelson (2009) also concluded with regard to the consequences: “Shortages in supply and the erratic quality of electric service in many communities have led to the widespread installation of diesel generators for private supply, thereby entailing costs for electricity well above the level which public utilities would have to charge after the needed upward adjustment in their rates”.

Basically, the consequences of uneconomically low tariffs are the same for both private and government-owned companies. The opportunities for covering the capital needs of the companies are limited because loans, even with government guarantees, are difficult to obtain on account of the size of the debt-service and the Government’s own creditworthiness (Matter,2008). Matter also argues the emphasis in all considerations regarding tariffs and financing of electric power should be on plentiful electric power rather than cheap power. “The saying that for any economy the most expensive electric power is the power which it does not have is quite true”.

Socio-political and similar considerations often play an important role in the development of a rural electrification policy. Many rural electrification schemes start with a very low demand level and to accelerate cost recovery, electricity consumption has to be built up as soon as possible. The associated policy often aims to reduce the initial connection fee or the electricity tariff or even both. The design of such a policy is also prompted by the desire to allow low income households to enjoy the benefits of electricity, and by the expectation that electrification will enhance development and income generation. The policy sometimes also includes financial support for the purchase of electric appliances.

However, in many developing countries tariffs are permanently very low. Munasinghe (1990) observes that in quite a few developing countries rural electricity tariffs rarely cover more than 15 to 30% of estimated costs of supply.

2.8 Possible Steps for investment attraction

The position taken by the government is that the proposed new Bill that comprehends the operations of the Zimbabwe Energy Regulatory Authority represents an important shift towards an integrated approach to the regulation of the entire energy sector. Before the new legislation is finalized, a thorough review of the current regulatory framework for the electric power sector will need to be undertaken to ensure consistency and compatibility with the regulation of other industries in the energy sector. The essential element of an effective regulatory framework for energy infrastructure and services is to place the responsibility for regulation in an agency with the required independence, autonomy, expertise, and accountability. The agency must protect the interests of both users and investors, and must do so in a fair and transparent manner (World Bank, 2011).

The regulatory authority should create an authorization framework that provides opportunities for new companies and investors to establish power supply, transmission and distribution businesses. Given the importance of the proposed private investment program for the power sector, the revised bill will need to give close attention to potential legal and other regulatory and policy impediments that may restrict private sector participation in the power sector, in addition to the requirement for an Independent Power Producers (IPPs) policy that clarifies the roles of various participants (NEPAD, 2012).

It will regulate competition (including tariffs) involving the effective enforcement of fair and equitable competitive market principles, restraining the power of dominant suppliers and leveling the playing field for new entrants (Competition and Tariff Commission).

Furthermore the regulatory agency's organizational structure should be regulated. The new entity would likely have separate technical units for the various industries within the energy sector. It would also have a number of support units, including finance, legal, human resources and communications. A substantial amount will also be needed on the specifics of the agency's responsibilities, staffing requirements of each of the units and recruitment, and

funding arrangements. Early decisions on these arrangements will, in turn, facilitate the design of Independent Power Producers arrangements for potential investors in the power sector, thereby laying the foundations for the design of contracts in the power sector and for the reporting obligations of IPPs.

The proposed Action Plan includes funding for a detailed assessment of the regulatory requirements for the power sector within the context of regulation of the energy sector as a whole.

2.9 Problems in the power sector in Africa in accessing fund

The poor performance of many of Africa's power utilities is a serious constraint to them engaging in energy trading across borders. This is currently evident, for example, in the case of Zimbabwe, where the state-owned utility is battling to pay for desperately needed imports. Many African utilities must therefore first improve their services before they can realistically contemplate the bigger regional and inter-regional picture (Multi-Lateral Investment Guarantee Agency and the Economist Intelligence Unit, 2008).

The relative inefficiency of the African power sector has been demonstrated in a number of studies. These studies show that it is possible to introduce changes in the power utilities to improve their performance. Two examples of such studies will be given here: the first study recommends certain structural/market preconditions that must be met for efficiency gains, while the second focuses on the internal changes needed in the governance of the power utilities themselves.

'Reforming the power sector in Africa' (edited by M R Bhagavan) review the performance of the power sector in Malawi, Tanzania, Uganda and Zimbabwe. They conclude that it is not possible to resolve the problems in the power sector without substantially reducing the role of the state. They state as follows:

The overall thrust of the reform process must be to detach the power sector from the apprehension and attention of the political class and the state bureaucracy, through conversion of the power utility into an independent and self-contained corporation, but formally still under state ownership. As the corporate culture takes root, and management

becomes used to taking and implementing its own decisions without constantly having to look over its shoulder at government, commercialization should be introduced. Commercialization will impose the discipline of commercial law and responsible regard for what the market expects and tolerates.

Neither corporatization nor commercialization will produce the expected results without the right kind of management in charge. Competition to run the corporate utility should be promoted, and management contracts issued with built-in incentives that fetch a premium for good performance. Where the requisite management is not yet available locally, there should be an openness to recruit internationally. Under such conditions, there are good prospects for turning around the fortunes of hitherto loss-making utilities and making them attractive to private investors’.

They then further propose a restructuring (‘unbundling’) of the industry into its three parts (generation, transmission and distribution), and suggest that, because competition in the market is not yet possible in sub-Saharan Africa, that competition for the market be considered. Finally, they conclude that it is also necessary to set up independent regulatory bodies, distanced from political, corporate and other pressures.

2.10 Technical and non technical barriers to electricity trade

The power sector in different African countries varies considerably. Each country’s power sector is at a different stage of development. Each faces different challenges. International experience demonstrates that regional or inter-regional electricity integration would bring substantial benefits to consumers in terms of lower costs and improved reliability and quality of service.

These benefits could come from improvement in investment and operational efficiencies that result from the diversity in demand and resources for generation. Better markets with larger competition that would attract private investor’s participation. Mitigation of the risks assumed by private investors; and diminution of the environmental impact of developing generation resulting from a better usage of energy sources and generation plant sitting (United Nations’ Sustainable Energy Regulation and Policy-making for Africa, 2009).

Some of the barriers to trade are reduced performance of many of the state-owned utilities, rendering them incompetent of transacting normal commercial activities energy approaches that rely on self-sufficiency.

There is no common or uniform legal or commercial framework in most of the countries to deal with cross-border electricity trade, and generally a lack of official support from governments for coordinated legal, regulatory and pricing policies such as lack of generally accepted accounting principles and standards in some of the countries, lack of general harmonization of technical codes, specifications and standards; and lack of trading mechanisms in the energy sector, which is much more complex than other goods or commodities (UNOCHA Report, 2008).

In addition to these barriers, the unsatisfactory political climate in many parts of Africa is a serious constraint to greater co-operation in the power sector. It is difficult for normal commercial trading to take place in war zones. There is also often the lack of political will to undertake cross border ventures, and the lack of continuity of economic policies in some of the countries interferes with long-term planning. This lack of trust between some countries is a serious impediment to progress (UNOCHA Report, 2008).

It is also the case that many countries in Africa are already short of commercial energy themselves, and exporting electricity is obviously not a priority in such circumstances.

Also, there is often little trade of non-energy commodities amongst countries in the regions/sub-regions, thus often no experience or confidence amongst countries to trade with each other.

Perhaps the most important barrier to trade in electricity is the lack of appreciation of the benefits which can be accrued from electricity trade between the respective countries by stakeholders and decision makers, including government ministers, technocrats, and even the business sector. Importantly, a study should be undertaken to demonstrate these benefits to decision-makers. A robust communication campaign targeting selected decision-makers, emphasizing existing success stories (such as SAPP and WAPP) must be a priority (UNOCHA Report, 2008).

2.11 Strategies and policies to upgrade and modernize infrastructure, including possibilities of attracting investment (Energy workshop in Senegal, 2008)

Relatively small, burdened with old equipment and have to manage with out of date business and commercial practices. A ‘one size fits all’ approach to strategies and policies to improve and update power infrastructure is thereof not ideal. Like in other parts of the world, African power utilities differ in size, modernity, competency and credit worthiness. While Africa has a few world-class power utilities, most of its utilities are burdened with old equipment.

A significant effort will have to go into ensuring that the management of the utilities is competent to undertake the task. Once the power utilities themselves are operating optimally, it is possible to focus on regional and inter-regional trade.

For this to occur, a critical step is to undertake a feasibility study (using consultants for legitimacy) to identify prospects of trade between African countries. This has already been acknowledged as a NEPAD initiative. The study will reveal the rewards available from regional trading. Making regional trading work will require a rigorous and versatile approach to address the current barriers to trade (Chiwaya, 2011).

The first approach should thereof be to employ the expertise available in the modern and competent utilities to assist less competent utilities. This includes benefiting from the strong balance sheets of these utilities to attract investment. An example of this strategy is the decision by Eskom of South Africa to establish a subsidiary (called Eskom Enterprises) for engagement in the African power sector. This has been a winning idea and can be simulated elsewhere (Bhagavan, 2008).

The second is the removal of trade barriers and dismantle of limitations in domestic and foreign private investment. This will require political approval at African Union level.

The third is the enhancement of financial systems and the recognition of market-friendly policies. This requires augmentation in sub-regional economic co-operation, including ways to smooth the progress of cross-border investments and channels to facilitate cross-border movement of goods and services.

The fourth is the institutionalization of significant market rules. These would build open, balanced access to transmission grids and allow for international exchanges grant for economic dispatch including any additional supply and demand from international interconnections inspect safety and quality of service criteria agreed upon under interconnection agreements provide access to pertinent data; and ensure compliance with legal agreements (Bhagavan, 2008).

The fifth is the establishment of technical codes, specifications and standards to promote harmonization.

To make certain a sound legal and regulatory framework for operating interconnections, international agreements would be required to ensure compliance with these conditions. These could be dealt with under African Union prescripts. It is only once these elements are in place that private investors will be prepared to invest.

Lessons can also be learnt from other similar international experiences such as the Scandinavian grid, the South American interconnections and US/Canada interconnections. Of course the examples closer to home (SAPP and WAPP) must also be studied closely.

2.12 Chapter Summary

Chapter 2 covered the review of literature regarding the research objectives mentioned in chapter 1. The review provided electricity deficit in Southern Africa and barriers to investment in the electricity industry. The review tries to identify available solutions to attract investments mainly looking at the regulatory framework. Also highlighted in this chapter are efforts by the government of Zimbabwe to reform its' electricity industry in a bid to increase power supply.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction

This chapter will outline the methodology of the study. It will explain how the data will be collected and analyzed to achieve the research objectives looking at research design, the research subjects, research instruments, data collection procedures and data presentation and analysis procedures.

3.1 Research design

Parahoo (2007:142) describes a research design as “a plan that describes how, when and where data are to be collected and analyzed”. Polit et al (2010:167) define a research design as “the researchers overall for answering the research question or testing the research hypothesis”. With regards to this study the case study method and descriptive survey method will be used. The study is of the infrastructure funding gap for ZESA the survey will be conducted by use of a self administered questionnaire which will contain closed and open ended questions.

3.1.1 Descriptive survey

It was defined research observation with insight.

Advantages

Descriptive study assists in providing information about a condition. It helps in identification of areas for further research.

Disadvantages

Emphasis is put on estimation instead of testing. The method is expensive to undertake. In this type of research you cannot identify the cause behind a phenomenon; you can just describe and report the observations.

3.2 Validity and Authenticity of findings

The questionnaire will be pretested to safeguard the validity of the findings. The questionnaires will be distributed to different levels in the organization, management, supervisors and employees. The researcher will ensure that the information never has identifiers associated with it and risk of identification of individuals is low.

3.3 Research Methods

3.3.1 Target Population

A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. The target population for this study is of 31 all participants at ZESA Southern region.

Bless et al (2009) stated that if one wants to collect accurate information about subjects the best strategy is to look at every element of the group .Due to time constraints and expenses the researcher will focus on apportionment of the group which is a sample.

3.3.2 Sample Structure

Samples are items selected at random from a population and used to test hypotheses about the population (<http://www.thefreedictionary.com/sample>).

According to Bailey (2007) the size of the sample should depend on the size of the population to be sampled. The sample should be carefully chosen because through it the researcher is supposed to see the characteristics of the population in the same relationship that they would be seen were the researcher was to inspect the total population. For the purpose of this study the researcher draw a sample of 4 Executive managers, 8 operational managers and 19 non-managerial staff.

The use of samples has advantages and disadvantages as highlighted below;

Advantages of Using Samples

It is cheaper gathering sample data than using the whole population. Elements chosen are representative of the population characteristics. Sample data can be gathered more timeously.

Disadvantages of Using Samples

There might be selection bias and other elements may be omitted.

3.3.3 Sampling Techniques

Judgemental Sampling: The researcher attempts to draw a representative sample of the population by using judgmental selection procedure. The amount of error depends upon the degree of expertise of the person selecting (Keogh, 2009).

The researcher used Simple random sampling in coming up with a sample;

3.4 Research Instruments

A research instrument is a testing device for measuring a given phenomenon, such as a paper and pencil test, a questionnaire, an interview, a research tool, or a set of guidelines for observation. The research instruments which are going to be used in this study are questionnaires and interviews.

3.4.1 Questionnaires

Kumar (2011) defines questionnaire as the list of questions, the answers to which are recorded by respondents. Respondents read the questions, interpret what are expected then write down the answers. The researcher used this method because of the advantages that it presented for instance there is time allowance for respondents to answer and also the aspect of strictest confidentiality which almost everyone is in favor of. The researcher wanted to obtain information from ZESA employees, the questionnaire allowed the researcher to obtain information in a relatively shorter time than would have been needed in a one on one interview. The researcher also used the questionnaire because it allowed the respondents to remain anonymous since the respondents were not asked to provide their identities but to just answer the questions.

The questionnaire is however not without limitations. In order to reduce the limitations of the questionnaire which include ambiguity of questions, the researcher tried to be as straight forward as possible on the questions on the issue of the challenges due culture. The

researcher avoided the use of double barreled questions so as to reduce cases of ambiguity. The questionnaire used in this study was designed in such a way that it contained both closed and open ended questions. Open ended questions are important in that they give the respondent an opportunity to express their own views about the subject being investigated without being controlled as is the case with closed ended questions.

The questionnaire for this study was divided into three sections; Section contained administration information, Section B had both closed- ended questions and open- ended questions. Closed ended questions are important in any study because they direct the respondent to the issues that the researcher wants to find out and by so doing spends less time in answering these questions.

Advantages

The advantages of a questionnaire are;

Large amounts of information can be collected from a large number of people in a short period of time and in a relatively cost effective way. Questionnaires' can be carried out by the researcher or by any number of people with limited effect to its validity and reliability. The results of the questionnaires can usually be quickly and easily quantified. There is anonymity. Uniformity in asking questions enables data not to have variations. Respondents answer at their own convenience and can give more information as they have more time to consult their documents. However the questionnaires have disadvantages when using them which are as follows;

Disadvantages

There is no way to tell how truthful a respondent is being. There is no way of telling how much thought a respondent has put in. The respondent may be forgetful or not thinking within the full context of the situation. People may read differently into each question and therefore reply based on their own interpretation of the question that is what is good to someone may be poor to someone else, therefore there is a level of subjectivity that is not acknowledged. Since respondents see the entire question before answering, it can lead to bias.

3.4.2 Interview Guide

Another data collection instrument used in this study is the interview schedule. The researcher will use face to face interviews questionnaire and will record the responses from the 5 Likert scale.

An interview is a formal meeting in which one or more persons question, consult, or evaluate another person.

A structured interview has fixed wording and sequence and set of questions are identical for all respondents. In an unstructured interview the researcher asks questions relevant to the hypothesis. Both structured and unstructured interviews will be used in this study.

Some of the data required for this research will be collected through depth interview with management who will give the holistic view of the organization. Interviews help the researcher to gather valid and reliable data which is relevant to the research questions.

Advantages

Lot of detail is provided. Information obtained is comparatively more accurate. Personal or intimate topic can also be discussed since the personal rapport is established between the respondent and the interviewer. It is a fast way of collecting primary data and is flexible. There is room to probe questions that are not clearly answered in questionnaires. It allows for a greater depth of response and the response is immediate.

Disadvantages

It is difficult to generalize since the interviewers are non-standardized. Since the success depends on the interviewer, there are chances of bias. Data analysis takes a lot of time. Respondents may feel uneasy and hence the interviewee may give false answers to please the interviewer. In order to avoid this in this research the respondents will be assured of confidentiality of their responses and the researcher will also explain the purpose of the research.

3.4.3 Validity and Reliability of Instruments

It is defined as the extent to which the instrument measures what it purports to measure.

Construct validity: The use of opinion from other researchers and experts. It looks at underlying theories or contracts that explain phenomena.

Content validity: refers to whether an instrument provides adequate coverage of the topic. Expert opinions, literature searches and pre-test open ended questions help to establish content validity. To ensure validity of the research instruments, a pretest of the questionnaire and the interview schedules will be carried out. This will be done to find out if the questioning in the research tool is not vague, ambiguous or poorly phrased. The pretest will enable the researcher to verify the time the respondent will take to complete the questionnaire as well as checking whether the research tools will measure what they intended to measure. The pilot study will be carried out using participants outside the target population.

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials (Kuder, G. F et al 1937). Reliability is synonymous with repeatability. Reliability will be tested by asking the same questions with slightly different wording on the questionnaires. Tuckman (1988) called this exercise test-retest reliability.

3.5 Data Collection Procedures

In order to achieve the objectives of research, two types of data, that is primary and secondary will be collected and used in the research.

Primary Data: Primary data was collected using self-administered questionnaires which will be hand delivered. The questionnaire will collect both structured and open ended questions. A questionnaire was distributed to the Accounting managers and Operatives of ZESA and consumers in the sample. Final questionnaires will then be amended and refined accordingly before final administration to employees.

The face-to-face method was also used through interviews were the researcher was reading out questions and soliciting responses following a specific order.

Secondary data: Secondary data was sourced from the internet. Literature from published and unpublished work was used to support the research.

3.6 Data Presentation and Analysis

Detailed analysis of data was undertaken. Findings and conclusions was drawn from the analyzed data.

3.6.1 Data Presentation

The researcher used both qualitative and quantitative for data collection. Tables, graphs, and pie charts were used to present findings. Answers were tabulated and this was provided in a pictorial presentation which is an effective and easy to understand as stated by Leedy (1984). Graphs and pie charts were used because they are easy to construct and interpret.

3.6.2 Data Analysis

Detailed analysis of data was undertaken. According to Leedy (1984) data assumed an added dimension when arranged in some configuration order, alphabetically, categorically, ascending and descending order. The researcher used the percentage method that is converting quantified data into percentage for easy analysis. Distributed and returned questionnaires were counted to verify the response rate. Answers were compiled noting the respondents with similar and differing responses at each question. Findings and conclusions were drawn from the analysed data.

3.7 Summary

This chapter clearly explained the research methodology that is a description of how the study was carried. It presented the research design, the subjects and sampling methods, the research instruments used which included questionnaire and interviews and data presentation and analysis procedures. The next Chapter four; Data Analysis and Presentation will deal with presentation of research results.

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter deals with presentation and interpretation of the results of the in-depth analysis interviews conducted and the questionnaire that was administered. The results obtained from questionnaire are the first section of this chapter followed by the responses from the interviews administered. The last section covers the analysis and interpretation of these results.

4.1 Response rate

The researcher distributed 31 questionnaires to the respondents of ZESA holdings southern Region, 4 Executive managers, 8 operational managers and 19 non-managerial staff. These questionnaires were therefore, distributed to thirty one employees and were all returned, representing a response rate of 100%. This response rate is high enough to ensure the study findings are valid and reliable with no bias.

4.1 Demographic Background of Respondents

4.1.1 Distribution of Respondents by Paterson Grading System

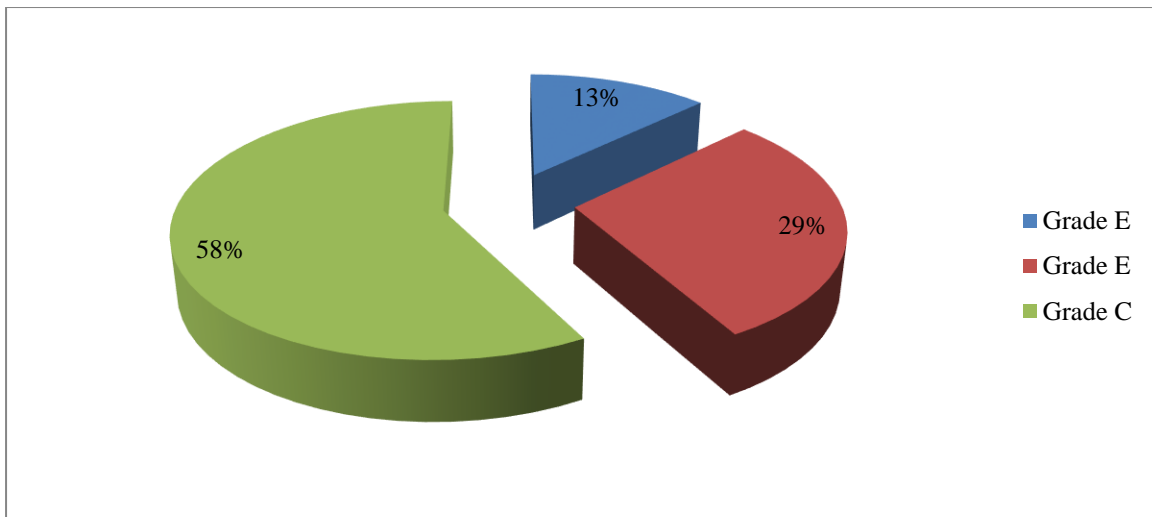


Fig 4.1: Distribution of respondents by Paterson Grading System

Figure 4.1 shows distribution of respondents by Grade. Executive managers comprised 19% of the respondents and 29% were operational managers/ Engineers. The remaining 58% were frontline supervisors and foremen. This shows the division of duties within ZESA showing how the largest percentage constituted by frontline supervisors and foremen who contribute largely to the operations of ZESA.

4.1.2 Distribution of Respondents by Professional Qualification.

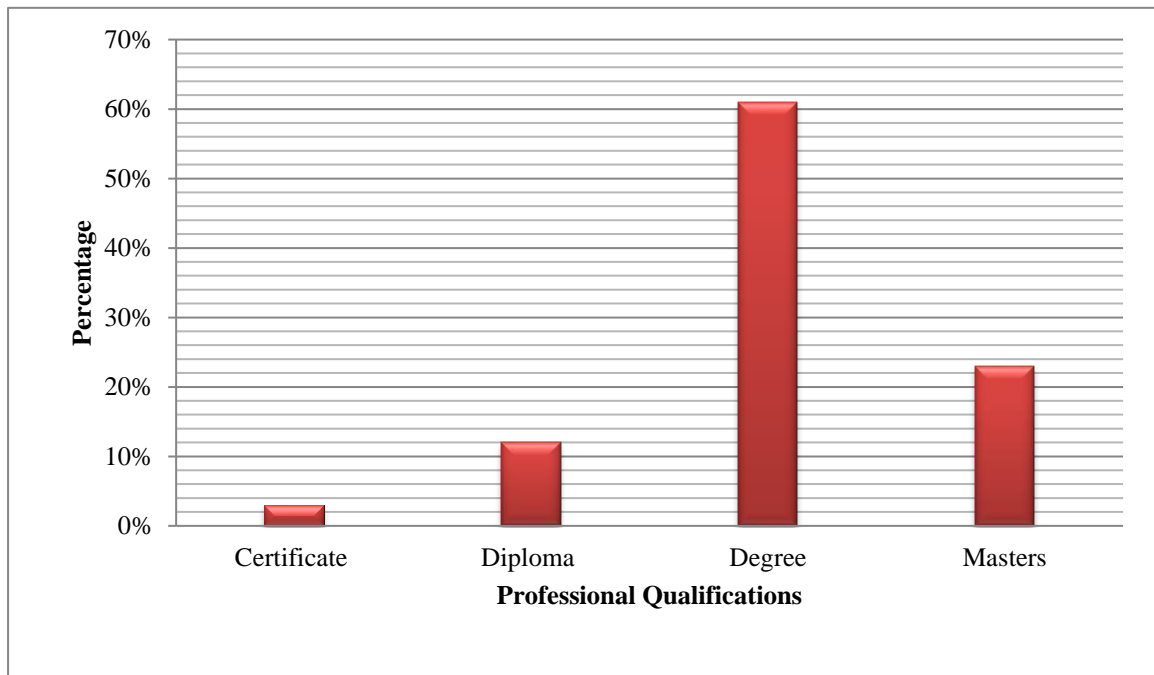
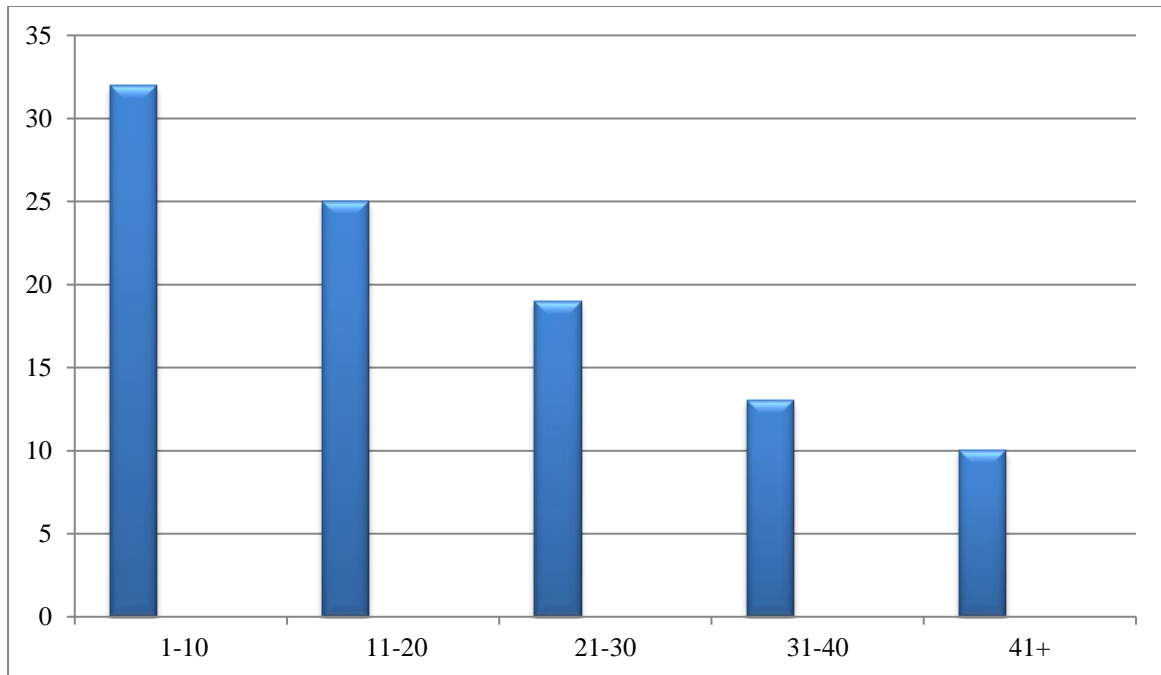


Figure 4.2 Distribution of Respondents by Professional Qualification

Figure 4.2 shows distribution of respondents by professional qualification. Only about 3% (1) were certificate holders whilst about 12% (4) were diploma holders. Furthermore, the majority, about 61% (19) were degree holders whilst about 23% (7) were masters' degree holders. This indicated that, on the whole, the respondents are adequately educated to contribute to issues regarding the funding gap assisting ZESA in decisions on infrastructure development.

4.1.3 Distribution of Respondents by Working Experience



Source: Research Findings 2014

Figure 4.3: Distribution of Respondents by Working Experience

Figure 4.4 shows distribution of respondents by working experience. From the respondents who participated 32% (10/31) had between 1 and 10 years of working experience whilst 25% (8/31) had between 11 and 20 years of working experience. Furthermore, 19% (6/31) of the respondents had between 21 and 30 years of working experience whilst about 13% (4/31) of the respondents had between 31 and 40 years of working experience. 10% (3/31) of the respondents had above 41 years of working experience. The result shows that the majority of the respondents were in the fewer years of working experience. This could be attributed to the brain drain caused by poor funding within ZESA. Those with longer working experience related their responses to operational efficiencies in the yester years prior to economic challenges

4.2 SECTION 2: LACK OF MEANINGFUL INVESTMENT IN ZESA.

4.2.1 Respondents Opinion on the Sidelining of projects due to lack of funding

Sidelining of projects	Agree	Disagree	Total
No. of respondents	20	11	31
Percentage of respondents	65%	35%	100

Table 4.2

Source: Research Findings 2014

Table 4.2 above shows respondents' sentiments towards the issue of sidelining of projects due to lack of fund. The response shows that 65% agree that projects are being sidelined due to lack of funds, whilst 35% were in disagreement with this notion of projects being sidelined. Evidently, as postulated by Price Waterhouse and Coopers (2014), the dominant view was that capital growth was not dominant as major projects had been sidelined in ZESA.

Fig 4.2.2 Responses from employees on the effects of power outages

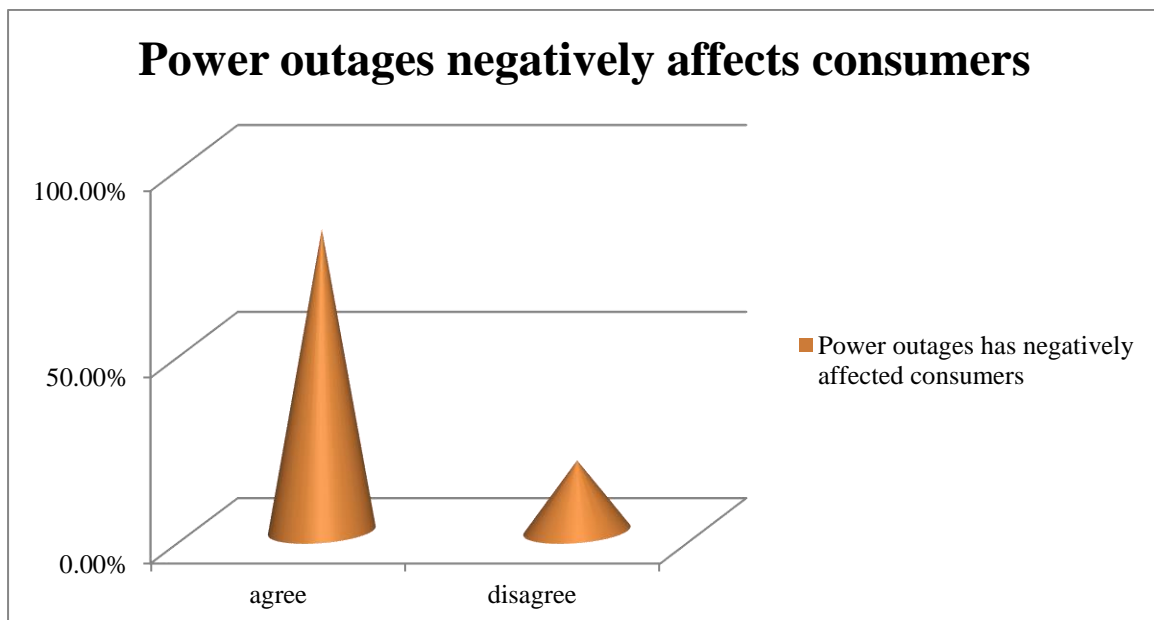


Fig 4.4: Responses on negative effects of power outages to consumers

The above graph shows that 81% of the respondents agreed with the view that power outages have negative effects to consumers whilst 19% disagreed, as evidently stated by Kaseke

(2014), electricity outages negatively impacted on consumers. ZESA has switched to power rationing and subjected high tariffs on consumers who use more power. This was adopted by many countries in the Southern Region citing the cost of imports and the reduction in power supply as a result of climate changes (UNOCHA Report 2009).

4.3 SECTION THREE:RESPONSES ON EFFECTS OF TARIFF PRICES ON INVESTMENTS.

4.3.1 ZESA’s tariff is sub-optimal and repulsive to investors

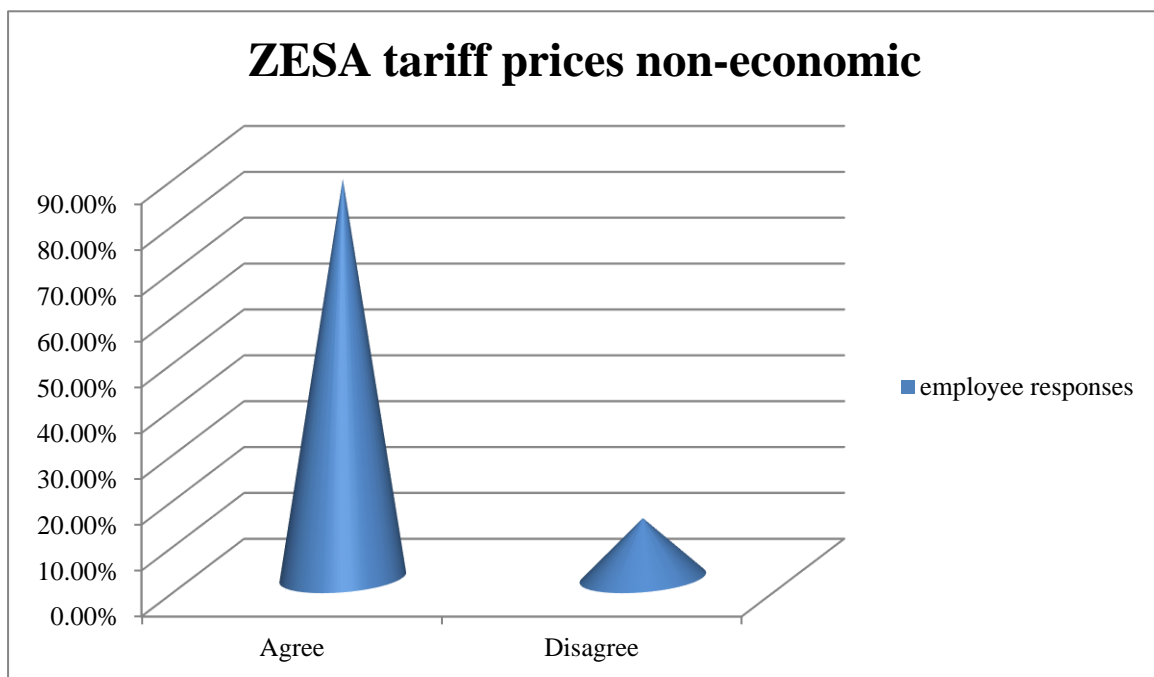


Fig 4.5 Responses to non –economic tariff prices

As shown in the observation 87% of the respondents agreed to the fact that the current tariff charged by ZESA is non- economic and 13 % disagreed. The reasons surrounding the tariff issue is the return on capital of 8.5% and distribution losses not accounted for which constitutes 15% of the power generated (ZESA Financial Statements 2011-2013).

4.3.2 Effects of matching tariffs with expenditure

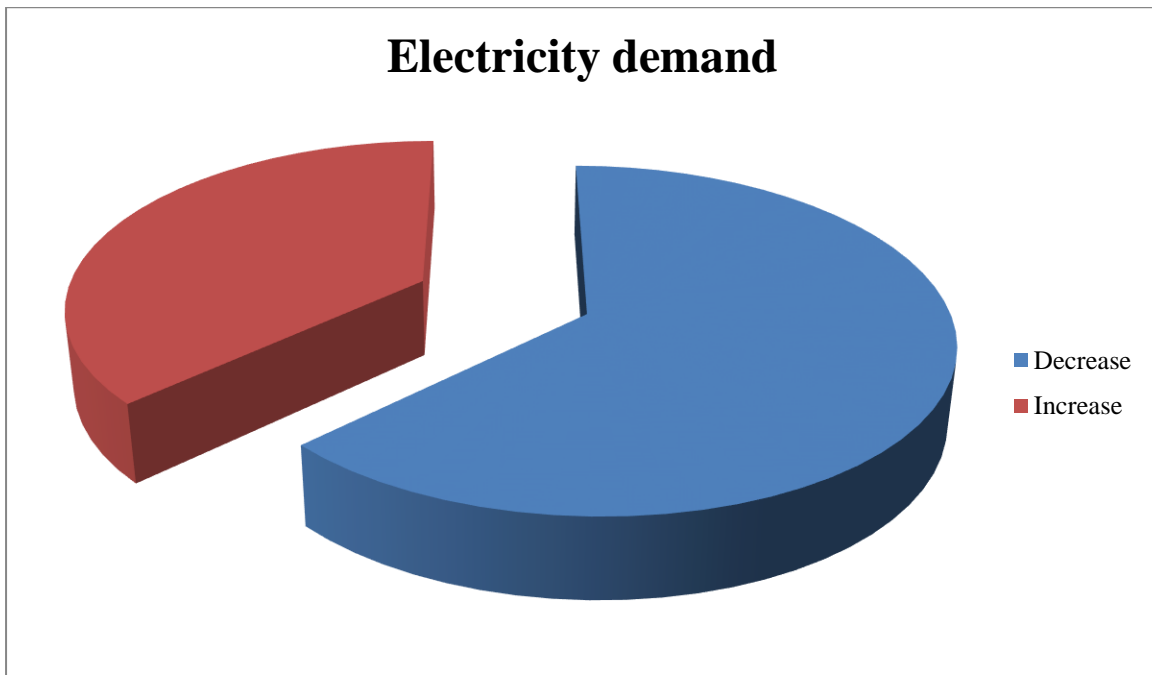


Fig 4.6: Responses on the effects of an increase in tariffs to demand

Fig 4.6 shows that an increase in tariff will reduce demand for electricity. The Southern African Power Pool in an Electricity forum in 2009 observed that increases in tariffs would make the poor poorer and suggested that sub Saharan countries should invest in cheap and renewable power such as hydro, solar and wind power.

4.3.3 Poor structuring of projects

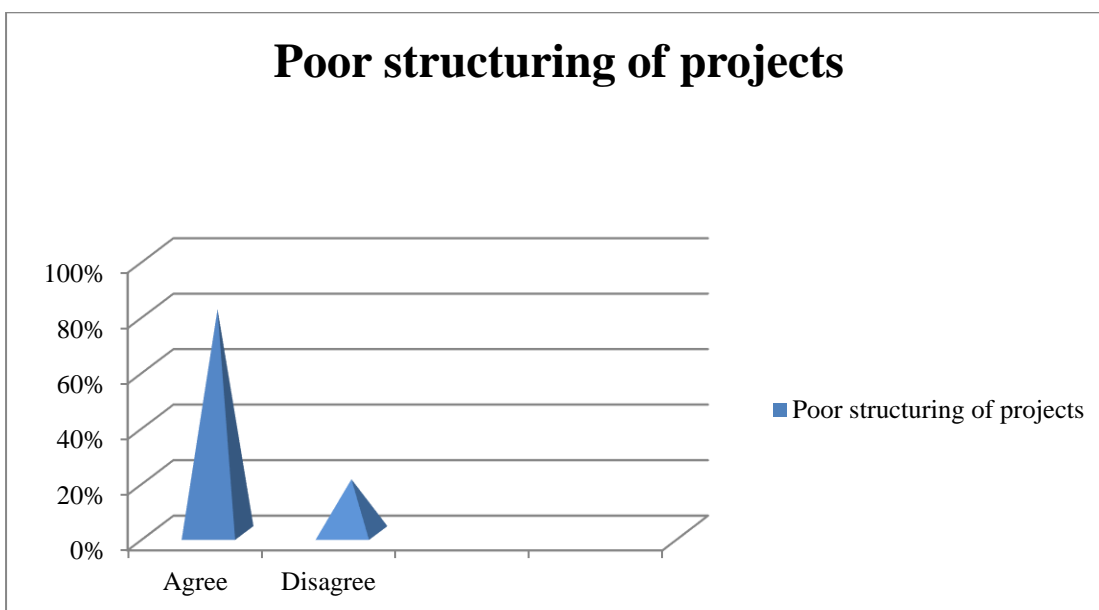


Fig 4.7: Responses on poor structuring projects

The respondents (80.64%) agreed with the opinion that most projects are poorly structured. Lack of resources has contributed to poor preparation of projects and calculation of expenditures to set a tariff that is fair and just. Investors are interested in well structured projects that indicate the level of risk associated with a project.

4.4 SECTION FIVE: SUGGESTIONS FOR IMPROVEMENTS

4.4.1 Respondents on the Commercialization of the power utility

Commercialization of ZESA	Disagree	Agree	Total
Percentages	16.13%	83.87%	100%
Numerical value	5	26	31

Table 4.3

Source Research Findings 2014

ZESA has a corporate culture of looking at government for taking and implementation of decisions and this has resulted in delays in initialization of projects. On findings 83.87% agreed to the idea of commercialization of ZESA whilst 16.13% were in disagreement with the idea.

4.4.2 Government guarantees on long term loans

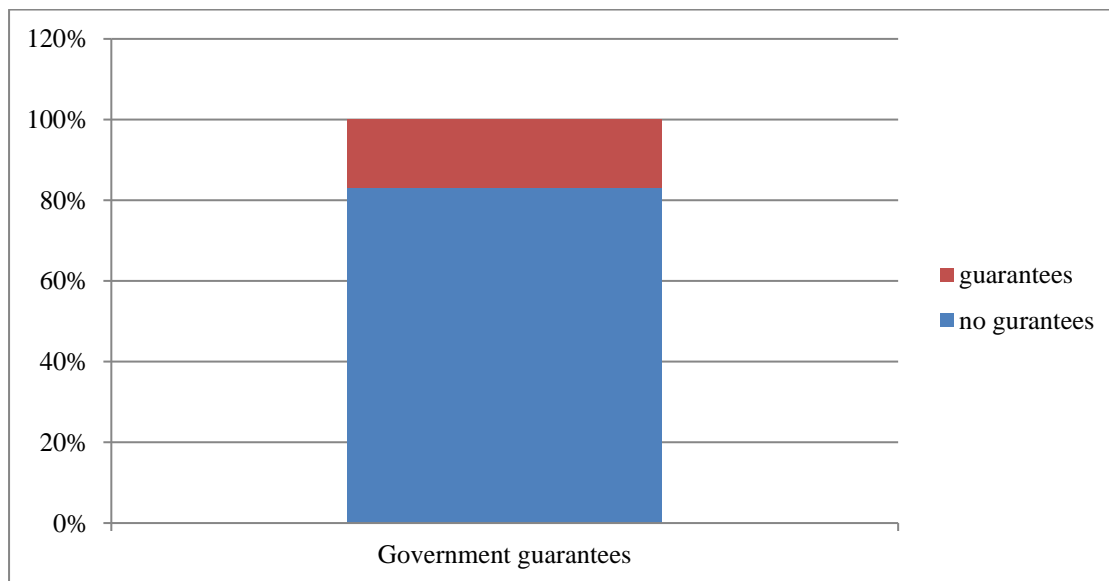


Fig 4.8: Government guarantees on long term loans

Fig 4.8 shows that the government of Zimbabwe has only guaranteed 13% of long term loans issued to ZESA. According to Kaseke (2014) the key factor influencing lenders is the capacity of ZESA to service and payback loans and as such the government should guarantee long term loans citing ZESA cannot produce significant collateral and its operations are controlled by the government.

4.5 RESPONSES FROM INTERVIEWS

4.5.1: Accessibility of funding in ZESA

Loan terms from banks/institutions/countries

Creditor Bank or Institution	Average Interest Rate %	Average Payment Period in years
World Bank	1.26	20
China-Exim Bank	4.92	11
Africa Development Banks	3.75	15
IDBZ	5.11	15
DBSA	5.5	12
Local Banks	6.17	15

Executive managers indicated that the World Bank, which has the lowest interest rate and reasonable payment periods, is not willing to avail loans to ZESA and the key factor influencing the lender is the capacity of ZESA to service and repay loans. Upon consolidating its fiscal position, the Government budgeted US\$455 million for capital spending in 2011 to support the much needed infrastructure rehabilitation of parastatals. In light of the very small budget for capital investment in the past, the Ministry of Finance (especially the Public Sector Investment Program, PSIP) and line ministries have been caught unprepared to manage this financing surge, and are simultaneously faced with a jammed pipeline of projects that had been started prior to the hyperinflation period in 2008-2009. Addressing the challenges in project management and monitoring, particularly under the growing capital expenditure budget, can vastly enhance the Government's capacity to provide basic services and in turn create improvement in the people's quality of life.

With the Treasury operating on a cash-based budgeting system, public spending has been restricted to yearly available cash. Many infrastructure investments that are critical for economic recovery and poverty reduction remain under-financed.

4.5.2: Forms of financial resources on offer



Fig 4.9 Available Financial Resources

Fig 4.9 shows that 87% of the financial resources available to ZESA are short term loans. Local banks are currently facing liquidity problems and most parastatals cannot securitize their borrowings unless the government guarantees their borrowings.

4.5.3: Power rationing

Power rationing	Agree	Disagree	Total
Percentage	23	8	31
Numerical value	74.19%	25.81%	100%

Table 4.3

From the respondents 73% indicated that their morale had been affected by power shortages and 27% indicated otherwise. The majority of the respondents indicated that their morale had declined due to power rationing including the employees who participated in the study and

they went further to mention that they were missing sales targets due to stock outs resulting failure to meet customers` demand, being idle on duty posed the risk of being laid off, and they also pointed out that productivity had declined therefore reducing their bargaining power in salary negotiations. This point is supported by study by Cecelia (2008) in South Africa where there was a decrease in employment opportunities of 129 000 due to power rationing. Generally employee morale is affected when income is decreased and being idle gives fear that they can be laid off anytime. Interviews with managers also revealed the negative financial effect that power rationing had on ZESA; all the managers said that company profits had plummeted due to power shortage and it reduces attractiveness of the power utility's projects to investors.

4.6: Other aspects of business being negatively affected by infrastructure funding gap in ZESA

The executive managers gave their views on the other aspects which are being negatively affected by funding gap. The production and human resources managers pointed out that employee morale was being affected by funding gap as most employees feared being laid off or completely losing their jobs if the company closed. The finance manager said that customers and shareholders were being impacted negatively; he mentioned that there had been delays in delivering orders in some instances and that declining annual earnings resulted in the company not paying dividends for the past three years. The human resource manager said it was difficult to hold employees accountable for not meeting orders and targets as they would always blame load shedding. The production manager also expressed that the frequency of equipment breakdowns had gone up due to erratic power supplies; he said when ZESA switches power on it often comes with higher than normal voltage which in the long-run damages electrical components. This result shows that the funding gap is pervasive in nature and has negative consequences on the entire spectrum of the company albeit with differing severity.

4.6 Summary

This Chapter mainly looked at findings from the research and it was seen that infrastructure funding gap affects productivity of ZESA negatively. Profitability also declines and this has

an effect on employee's welfare. Power rationing also leads idleness and this results in fear by employees to lose jobs and lose their benefits. Findings also showed that ZESA could not meet the required rate of electricity due to cash problems, under maintenance of equipment and under refurbishment of power stations. The next Chapter V will look at Summary, Conclusion and Recommendations.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of three main sections that conclude the entire research report. These are the summary, the research conclusions and the recommendations. These sections inform the reader about the research problem tackled, the research methodology used and its limitations, major findings of the study and their implications for practice. After the analysis, the researcher came up with recommendations which she suggested for possible implementation by relevant authorities.

The researcher finally suggested an area of possible research, anytime in the future. That area has been suggested as a result of data analysis that was executed in the previous chapter.

5.1 Summary

Chapter 1

Research study focused on highlighting the infrastructure funding gap of parastatals .Chapter one dealt with the background of the area under study, statement of the problem in which the research identified Objectives, research questions, limitations, assumptions as well as delimitations were also discussed.

Chapter 2

Chapter two carried out the bulk of the literature that the researcher constantly referred to in the study. Relevant Literature was used to explore views of other scholars pertaining to issues surrounding electricity reforms in emerging markets. Secondary sources, texts, newspapers, journals among others were also used to analyse the infrastructure funding gap of ZESA. Enough ground was covered to provide the basis for the research under study.

Chapter 3

The research instruments used were namely the questionnaire and personal interview to collect primary data whilst secondary data was collected using the desk technique. The questionnaire was pretested through a pilot survey where three questionnaires were sent out, which resulted in the fine tuning of some of the terms of the questionnaire. The questionnaire copies were hand delivered to 31 employees at ZESA Southern Region and an introductory letter accompanied each copy. The researcher as she works there also visited every organization department to check on progress made in the completing the questionnaire. Personal in depth interviews were conducted at the company premises of the interviewees. The researcher managed to interview four executive managers. The researcher reminded the interviewees of the interview a day before the interview. The researcher arrived in time for interviews though at times interviewees failed to meet the time due to pressing issues. Thus researcher in certain instances waited and conducted the interviews after work hours.

Chapter 4

The research design was descriptive survey that entailed the collection of opinions from ZESA management and employees using interviews and questionnaire respectively. Data was presented using statistical tools such as graphs and tables. Interviews and open-ended questionnaire questions were analyzed using thematic searches with relative and absolute frequencies being used to identify significantly popular responses, which were then discussed in the context of the literature review.

The researcher arrived at conclusions after analyzing research data in Chapter IV. These conclusions subsequently made it possible for the researcher to formulate and suggest recommendations for implementation by relevant authorities

5.2 Conclusion

From the research findings one can note that there is a huge infrastructure funding gap in ZESA. Lines of credit have been unavailable to enable the company to meet its operational requirements and embark on expansion projects. ZESA infrastructure funding has deteriorated dramatically after an economic crisis between 2007-2009.

The lack of meaningful funding has negatively contributed to power rationing, revenue losses and affected employees' morale in executing their duties. Failure by the power utility to meet its revenue requirements has been a result of distribution losses which are mainly a result of

under maintenance of existing infrastructure. Large amounts of capital are invested in mining resources and industrial manufacturing processes. Far lower proportion is invested in infrastructure that drives economic growth.

ZESA has failed to access funds as a result of legacy debts outstanding, high debt to equity ratios and lack of government guarantees on long term financing. Investors are mainly interested on protecting their funds and as such high debt to equity ratios shows the inability of the power utility to service its debt.

ZESA currently charges non-economic tariffs as the power utility realises a low return on capital and the utility's effort to increase its tariffs have been declined by the Zimbabwe Energy Regulatory Authority. A survey has shown that ZESA generates, transmit and distribute electricity at USD\$10,86 which is way below the tariff price at hand. Cost-reflective tariffs remain key imperative for the power utility's financial sustainability.

ZESA faces significant capital shortage and financing constraint, given the record of economic instability and poor credit-worthiness. The parastatal sector as the potential driver of the economy is hindered by limited lines of credit. Also banks face a liquidity problem, the cost of short-term loans remains high, and a medium and long-term capital investment has not yet developed. Furthermore, the policy environment has not been sufficiently conducive to attracting foreign direct investors. With the Treasury operating on a cash-based budgeting system, public spending has been restricted to yearly available cash. Many infrastructure investments that are critical for economic recovery and poverty reduction would remain under-financed into the long-term.

5.3 Recommendations to ZESA and the government

ZESA should focus on developing legal and regulatory frameworks. The government should identify key gaps within legal framework and draft regulations and laws that address these gaps. Laws should look to global precedent in order to make their process efficient. Central government should provide sufficient decision making powers to these institutions to ensure a controlled prioritized approach. Government should develop clear procurement framework

that encourages transparent processes. Feasibility studies should be well projected to avoid misrepresentation of facts.

They should be careful selection of projects that attract investors. Alternative sources of financing should be considered such as pension funds and insurances. ZESA should improve projects that are environmental friendly. The utility should charge cost reflective tariffs to eliminate losses and realize a higher return on capital. The power company should be commercialized and managers should be liable for inefficiencies in their respective jurisdictions. Government should guarantee repayment of long-term loans.

5.4 Areas of further research

It was noted further research will be necessary in the Feasibility studies for new projects and assessment on the form of energy that the country should invest in.

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Appendices

APPENDIX A: Letter of participants



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Department of Accounting
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Gweru

TO: WHOM IT MAY CONCERN

I am a final year student studying a Bachelor of Commerce Accounting Degree. In partial fulfillment of this programme students are required to carry out a research of their choice. My research topic is **An Analysis of the Infrastructure Funding Gap of Parastatals in Zimbabwe (Case of Zimbabwe Electricity Supply Authority Holdings)**. I am seeking approval to carry out the research in your organization. In addition assistance will be required of any information related to my topic and all the information will be treated with confidentiality and only used for academic purposes.

Thank you for your co-operation

Yours faithfully

Rudo M. Kunaka

APPENDIX B: Questionnaire to Managerial and non-managerial staff

Please tick in one of the boxes provided or fill in the spaces provided for your responses. Any information provided will be used solely for academic purposes. Your cooperation will be greatly appreciated.

SECTION 1: BACKGROUND INFORMATION *Please tick the appropriate box*

1. Which grade do you hold in your organization?

Grade C

Grade D

Grade E

Other, specify

2. Indicate your department in your organization?

Engineering

Maintenance

Commercial

Other Specify

Other Specify

3. Indicate your professional qualifications

Certificate

Diploma holder

Degree

Any other Specify.....

4. **How long have you been with the company?**

Less than 1yr

1 to 5yrs

5 to 10yrs

More than 10yrs

SECTION 2: LACK OF MEANINGFUL INVESTMENT IN ZESA

1. Most of the organization's projects have been sidelined because of lack of funds?

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

2. The current erratic power supply has negatively affected consumers?

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

SECTION 3: EFFECTS OF TARIFF PRICES TO INVESTMENT

1. The current tariff price is sub-optimal and repulsive to investors?

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

2. An increase in tariffs will reduce electricity demand?

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

3. ZESA has failed to properly structure its projects to lure investors and convince regulators on a tariff increase based on feasibility studies for existing and new projects?

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

SECTION 4: SUGGESTIONS FOR IMPROVEMENTS

1. Commercialization of the power utility will improve service delivery and will instill an element of competition in ZESA and lure investors

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

3. Government should guarantee long-term loans to minimize risk of default by Parastatals

Strongly Agree [] Agree [] Disagree [] Strongly Disagree []

3. What measures will you suggest to improve Parastatals infrastructure funding gap?

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

Thank You!

APPENDIX C: Interview Schedule

- 1.** What are the loan terms for funding available to ZESA?
- 2.** Which forms of financial resources are available to ZESA?
- 3.** How has power rationing affected the utility's operations, profitability and employees' morale?
- 4.** What other aspects do you think are contributors of challenges in investor attraction in ZESA?