

# **CHAPTER 1**

## **INTRODUCTION**

### **1.0 Introduction**

This chapter is an introduction to the study, the background of the study, statement of the problem, the main research problem, objectives of research, research questions, justification of the study, delimitation of the study, research methodology and definition of technical terms as they are used in the research and summary.

### **1.1 Background to the Study**

The Zimbabwe Council for Higher Education (ZIMCHE) was established by an Act of Parliament Chapter 25:27 promulgated in 2006 to repeal the National Council for Higher Education Act (Chapter 25:08). The main functions are to register and accredit institutions of higher education and their course programmes.

ZIMCHE operates through committees which are currently five as follows: Executive Committee; Higher Education Quality Assurance Committee; Higher Education Finance Committee; Human Resources and Administration Committee; and Student Academic and Welfare Committee.

The Higher Education Finance Committee is responsible for advising the Minister on policies, principles, formulae and criteria governing the allocation of public funds to institutions of higher education.

The minutes of the first meeting of the Higher Education Finance Committee held on 23<sup>rd</sup> of July 2009 the Chairman tasked the ZIMCHE secretariat to look into funding of state universities in order to come up with a model for allocating funds to higher education institutions to address concerns raised by most state universities. The Ministry of Higher and Tertiary Education, Science Technology and Development had received complains from some state universities during its regular meetings with universities. Some of complains were uneven distribution of financial resources to the nine state universities by the government on the fiscal. The Permanent Secretary for the Ministry of Higher and Tertiary Education, Science Technology and Development had instructed ZIMCHE to look into funding of state universities and come up with a solution.

The table below shows how the funds were allocated to various universities by the government and how other universities are given the same amounts in 2013 and 2014 while one university has much more than others.

**Table 1.1**

**BUDGET ALLOCATIONS FOR OPERATIONS 2009 TO 2014**

<b>Name of University</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Bindura University of Science Education	700,000	500,000	900,000	900,000	600,000	600,000
Chinhoyi University of Technology	800,000	600,000	1,050,000	1,050,000	600,000	600,000
Great Zimbabwe University	700,000	500,000	1,000,000	1,000,000	600,000	500,000
Harare Institute of Technology	400,000	300,000	700,000	700,000	500,000	600,000
Lupane State University	235,000	300,000	600,000	600,000	500,000	500,000
Midlands State University	1,400,000	1,000,000	1,000,000	1,000,000	600,000	600,000
National University of Science and Technology	1,200,000	900,000	1,100,000	1,100,000	600,000	600,000
University of Zimbabwe	3,000,000	1,500,000	1,300,000	1,300,000	900,000	900,000
Zimbabwe Open University	1,000,000	800,000	1,050,000	1,050,000	600,000	600,000
<b>Total</b>	<b>9,435,000</b>	<b>6,400,000</b>	<b>8,700,000</b>	<b>8,700,000</b>	<b>5,500,000</b>	<b>5,500,000</b>

Source: Ministry of Finance and Economic Development - Budgets

The minutes of the 5<sup>th</sup> meeting of the Zimbabwe Council for Higher Education held on the 20<sup>th</sup> of August 2010, the Chairman of the Higher Education Finance Committee advised Council that Finance Committee had deliberated on and adopted the funding model which it was in turn recommending for approval by Council. The Council noted that the funding model had been widely circulated and no objections had been raised. Council agreed to adopt the model and requested the Ministry of Higher and Tertiary Education officials to liaise with colleagues in the Ministry of Finance to facilitate the adoption of the model for use in the 2011 budget. The model was recommending the allocation of funds to state universities basing on student enrolments of the previous year 2010 statistics. The model for allocating funds was not implemented because officials from the Ministry of Finance and Economic Development and the Ministry of Higher and Tertiary Education said that it was not covering important aspects.

The major reasons for its rejection were that the student enrolment was the basis for allocating funds using the previous year statistics; universities were not consulted and applying the model on employment costs. Firstly, there was need to separate the employment costs from the operations since each particular university had different levels of members of staff at various grades depending on their qualifications and experience. Secondly, using the student enrolments was encouraging over enrolment of students to get more funds meanwhile compromising quality of graduates produced. Lastly, each university retained 100% fees charged on students putting it at better position in terms of funding.

The table below (Table 1.2) shows the universities' student enrolments from 2010 to 2013 and comparing with the funds allocation in Table 1.1 reflects uneven distribution of resources in 2014.

**Table 1.2**

**STATE UNIVERSITIES' ENROLMENT STATISTICS 2010 TO 2013**

<b>Name of University</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Bindura University of Science Education	2,116	4,394	5,362	3,854
Chinhoyi University of Technology	4,533	5,443	5,443	5,135
Great Zimbabwe University	2,671	4,201	4,481	3,270
Harare Institute of Technology	622	1,245	1,458	1,719
Lupane State University	521	862	1,576	2,179
Midlands State University	10,648	10,258	16,200	17,159
National University of Science and Technology	4,646	7,098	1,215	3,087
University of Zimbabwe	7,636	8,310	11,975	12,273
Zimbabwe Open University	15,303	8,568	15,303	8,568
<b>Total</b>	<b>48,696</b>	<b>50,379</b>	<b>63,013</b>	<b>57,244</b>

Source: Ministry of Higher and Tertiary Education, Science and Technology Development – Computer and Statistics Unit

Currently, the Ministry of Finance and Economic Development is allocating funds basing on the ability of each university to bid for its budget. When given insufficient funds some universities can launch their complaints and be heard by the management of the Ministry of

Finance and Economic Development because of their past history. As at September 2014 there is no model used to allocate funds to state universities by the Ministry of Finance and Economic Development officials. There is need to come up with acceptable model of allocating funds to state universities which incorporates all stakeholders.

## **1.2 Statement of the Problem**

The two tables, Table 1.1 and 1.2 are reflecting uneven distribution of funds comparing with the student enrolments against the allocated funds as other universities are given the same amounts in 2013 and 2014 while one university has much more than others. The Ministry of Finance and Economic Development has no model for allocating funds but basing on their judgement of the ability of each university to bid for its budget, past history and influential position. Although the government is funding the state universities, there is no model used to allocate funds resulting in having uneven distribution of financial resources basing on each university's requirements.

## **1.3 Main Research Question**

An analysis of funding of state universities by government can be split into:

- i. How are the funding systems established in state universities?
- ii. Who implements each of the funding system in state universities?
- iii. What are challenges faced in funding system?
- iv. What control measure and review process is put in place for checking each funding system?
- v. How is the funding system in other countries operated?

## **1.4 Research Objectives**

The research study aims to achieve following objectives:

To establish the funding system for state universities.

To establish the existence of funding systems implementation.

To assess personnel capacity in implementing funding system.

To understand the challenges in the funding system.

To assess the controls over the funding system.

To establish the best practice in university funding.

### **1.5 Justification of the study**

The research findings:

To the researcher:

The research is submitted to the Midlands State University in partial fulfilment of the requirements of the Bachelor of Commerce Accounting Honours Degree and will enhance the assessment of the student to complete the degree programme.

To the Midlands State University:

The research shall be providing literature for the library.

To the Organization:

The research study is designed to help the Zimbabwe Council for Higher Education consider a recommendation for adoption.

### **1.6 Limitations to the study**

The study had the followings limitations:

The research experienced financial constraints to visit all state universities to make all necessary observations and check on strategies for each institution. The researcher had to revise his personal budget to make important travel arrangement.

When collecting data some interviewees were reluctant to give information as they seemed suspicious of the research study. The research had to assure that the information sought was going to be utilized purely for academic purposes. The time was very short for the study considering that I had to carry out normal duties at work. As a result the research had to work beyond normal hours to accomplish the objectives.

## **1.7 Assumptions**

The study would have following assumptions:

The respondents would provide unbiased response and cooperate.

The responses would be held in confidence for academic purposes only.

## **1.8 Delimitations of the study**

The study focused on years from 2009 to 2014 for the funding policy guidelines of state universities in Zimbabwe.

## **1.9 Definition of terms**

Government	Government of Zimbabwe
HEI	higher education institution
MOFED	Ministry of Finance and Economic Development
State University	University wholly owned by the government
ZIMCHE	Zimbabwe Council for Higher Education

## **1.10 Summary**

This chapter looked at the background, environment analysis, statement of problem, research questions, research objectives, justification of study, limitations, assumptions and delimitations. The next chapter is on literature review.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter looks at the related literature on funding system, funding definitions, implementation of funding system, funding process, sources of funding, categories of funding for state universities, tuition fees, research contracts, control of funding system, future funding of higher education, private public partnership, differentiated government funding model, cost sharing, differentiated and privatization, and control measures of funding system.

#### **2.1 Definition of funding**

According to <http://en.Wikipedia.org>, funding is the provision of resources usually in the form of money (financing) or other valuable such as effort or time for a project, a person, business or any other private or public institutions.

#### **2.2 Sources of Funding**

De Villiers (2006) noted that it had become a global phenomenon that most Governments revenues lag estimates that the treasury resorted to cutting budgetary allocations to the education sector.

McGregor (2008) supported De Villiers when he quoted the Minister of Higher Education, Blade Nzimande highlighting that government had failed to give adequate funding due to challenging fiscal conditions. He noted that budget allocations were way below expectations of Universities.

McGregor (2008) is supported by Evelyn (2008) who observed that most universities had to freeze the hiring of additional staff, impose travel restrictions, postpone maintenance and construction projects due to lack of funding.

McGregor (2008) observed that the economic conditions and the demographic bulge in several African countries had resulted in unprecedented enrolment pressures, however under funding precluded the purchases of equipment or engaging of staff to meet demand. This view is upheld by Grapevine survey of state tax appropriations to Higher Education, in which

he reiterates that budgetary constraints caused most Universities to resort to cost cutting measures in the form of deferred replacement of old computers, systems, severe cuts on expenditure on technology related instructions and on line course.

McGregor (2008) observed that higher education institutions had resorted to increase tuition fees sharply to mitigate the effects of stagnant. This assertion is supported by the College Board in which the board warned that some Universities were increasing academic fees to above inflation levels. Orzag (2008) observed that there had been high incidence of staff exodus and brain drain from higher education institutions because staff were generally over worked and under paid. Orzag's remarks about academic staff assert that "inevitable energy is sapped, compromises are made and productivity fails. The extreme erosion of working and living conditions on many campuses had driven many academics to seek refuge in cynicism reality, actual or psyche truancy, dereliction of duty and opportunism". Orzag's views are supported by Siwela (2002) who observed that lack of adequate funding means that academics could not contact with colleagues elsewhere, maintain subscriptions to professional bodies and had no access to research funding and other facilities.

Siwela (2002) noted that the poor performance of most African economies affected by the impact of the economic structural adjustment programmers had resulted in serious reduction in the budgeting allocations to higher education institutions. [www.en.wikipedia.org](http://www.en.wikipedia.org) supported by highlighting that budgeting constraints had resulted in having under-resourced libraries, dilapidated physical infrastructure, and obsolete and unserviceable laboratory equipment. Siwela's views is also supported by Goma (2008) in which he observed that financial problems bedeviling the Universities were such that it was difficult to support science and technology which were key to development.

Salmi (1991:19) stated the capacity to raise significant revenue from the source was affected by the volatility of interest rate. In addition, the dwindling Government support means that the tertiary institutions did not have surplus funds to invest.

Woodhall (2006) observed that the governments of most countries had not only reduced funding to the Universities but also the support rate to the students in the form loans. Thomas (2007) argued that central planning of Higher Education was no longer feasible, so that graduates should share in the cost of Higher Education and that they were a number of characteristics coming to well-designed student loans.



Thomas (2007) further highlighted that shortage of financial resources had resulted in most institutions devising mechanisms of enrolling private students who paid fees determined by market rates as opposed to conventional students who paid sub-economic fees pegged at low rates by the government.

Jones and Kelly (2005) observed that many educators, policy makers and general public might thought that interstate financial analysis should specify what “appropriate” or “sufficient” funding for State Universities would be, but sufficient was meaningful only in context of a particular state’s objectives and circumstances. The state leaders, educators and others must work together to set goals and develop strategies to achieve those goals, and then determine the amount and allocation of funds required for success.

Jones and Kelly (2005) further noted that whether the objective was to sustain competitive advantage or to improve the post-secondary school education system, money was always an issue. With additional resources, educators could serve more students at higher levels of quality. But spending more did not necessarily yield proportional increases in quality or quantity. Efficiency is a thorny issue in educational finance, educators always can find good uses for additional resources and resources are always limited.

Hovey (2007) supported views of Jones and Kelly by noting that if educators, and policy makers could agree that, it was highly desirable to achieve wide spread educational attainment more cost effectively, they could work together to increase educational productivity. Authentic productivity gains require sustained effort rather than across the board cuts using both incentives and innovation.

### **2.3 Categories of funding of state universities**

Hovey (2006) identified major categories of funding as fees, state appropriations and other sources as the principal sources for most universities in the world. He noted that other sources were primarily auxiliary services such as dormitories, bookstores, research and development, private grants and contracts.

#### **Fees**

Clift (1999) stated that tuition fees contributed 16% in American Universities. Hovey (1999) noted that as tuition and fees risen, students have relied on financial aid to help pay for those

increases. Support per full time equivalent student after adjusting for inflation increased by 82% between the academic years (1990-91) and (2000-2007). In addition to that he highlighted that most of the increase in financial aid come in the form of loans specifically unsubsidized loans.

Wange nge-ouma (2008) also noted that the frequent rising of tuition fees, which was one of the main strategies public universities had resorted to, as a way to mitigate declining state funding was not without controversy. Lingerifelter (2007) supported that tuition charges were the other primary source of revenue used to support public Higher Education operations. Net tuition revenue typically had increased faster when state and local revenue had failed to keep pace with enrolment growth and inflation. He further noted that in 2007, the increases in state and local revenue exceeded the growth of net tuition revenue, and the share of total educational revenue, from net tuition decreased for the first time since 2000 in South Africa.

### **State appropriations**

Steyn and Vermeulen (2006) noted that public funding of land, buildings and land improvements other than buildings at Higher Education Institutions dating back to (1951) (all jointly referred to as capital expenditure) was by means of earmarked allocations.

He further stated that until 1999, capital expenditure at state universities was subsidised at a rate of fifteen percent for academic buildings and thirty percent for buildings for institutional housing (mainly residences). In this regard treasury approved a situation where state can subsidise building projects (including residences) at universities on a dollar for dollar basis if private donations were availed (Steyn and De Villers (2006). Steyn (2006) also stated that in case of insufficient donations, the state would annually subsidise forty percent of the interest and redemption on the private buildings loans of universities.

### **Research contracts**

Bligh (1990) noted that universities get about a third of their money in research contracts as they can be contracted to do research for private companies for fees. Universities act as centre for research and sell their research materials either by subscribing or simply allowing individuals and organisations to buy the articles at an agreed price.

## **2.4 Implementation of funding system**

According to Taylor (1991) stated that the government uses the system of direct funding to state university. The entire process entails that universities like other state enterprises do submit budget bids in the form of proposals supported by justified anticipated costs and staff salaries.

Varghese (2001) said that the system of university budgets has to be approved by government and as such the system imposes operational constraints on universities where no allocations are approved on planned activities such as capital projects. Samil (1992) noted that higher education institutions find themselves in relatively unstable situation and have to react quickly to upcoming opportunities and threats. It implies that rules and regulations pertaining to the utilization of public resources need to be flexible especially in the disbursement of funds. Budgeting, disallowing the carrying over of funds at end of each year to be allowed.

Tefrera and Altbach (2003) noted that for state universities to be able to mitigate viability challenges, the funding system as well as legislative framework conducive to generation of supplementary income and the diversification of resources are to be amended. The authors further stated that the government should allow institutions to retain a portion of financial revenue that they would have generated. The granting of autonomy to use the money thus gained on institutional projects capacitates universities to invest in the market thereby creating better resources base and provides incentives for growth resulting in resources diversification.

## **2.5 Controls and review of funding system**

Saint, Hartnett, and Strassner (2003) stated that university funding had been distributed in broadly equitable ways across both institutions and disciplines with little concern for their performance. In the years following the study by Saint et al. (2003), the findings could be generalized to not only Nigeria, but most African nations. World Bank (2010) observed that performance-based funding has been limited to South Africa alone in the whole of Africa; while countries such as Botswana, Ethiopia, Mozambique, and Tanzania were already considering its adoption.

Sams (2011) concluded that that misappropriation of funds was the major challenge to the implementation of education policies in Nigeria. It could be attributed to equality formula of allocating funds among the public universities. The dwindling funds received by universities in Nigeria and mismanagement of funds had become important to amend the formula of allocating funds for efficiency and effectiveness. The existing funding framework appeared to be input driven and consideration was not given to the outputs (Hartnett, 2000; World Bank, 2010).

Salmi and Hauptman (2006) identified four types of allocation mechanisms that could be considered under performance-based funding. The four mechanisms are as follows:

A portion of public funding for tertiary education to be set aside to pay on the basis of various performance measures. As performance contracts governments should enter into regulatory agreements with institutions to set mutual performance-based objectives. The output or outcome measures should be used to determine all or a portion of the funding formula for paying tertiary education institutions for the number of students who graduate, sometimes with higher prices for graduates in certain fields of study or with specific skills. There should be competitive funds, which support peer-reviewed proposals designed to achieve institutional improvement objectives.

## **2.6 Best practice in university funding**

Steyn and De Villers (2006) noted that the funding of higher education by means of formula has been in practice in South Africa helping institutions to plan ahead. They further noted that the funding formula is goal-orientated and performance-related as well enabling the distribution of government grants to institutions in line with national goals and priorities and approved institutional plans.

### **Funding formula**

The following is the funding formula for allocation of the recurrent budget from Central Government:

$$IRG = i + o + r + f$$

Where

IRG –Institutional recurrent grant (recurrent grant for each institution)

i – Teaching Input Grant

o – Teaching Output Grant

r – Research Output Grant

f – Institutional Factor Grant

### ***Teaching Input Grant***

A teaching input grant is the amount of resources allocated to an institution for teaching purposes based on the enrolled full time equivalent students (FTE).

### **DEFINITION OF FULL TIME EQUIVALENT (FTE) VALUE OF A STUDENT**

A Full Time Equivalent Student (FTE) is one who enrolls for a minimum of eight (8) modules in an academic year, each module with a minimum of seventy two (72) contact hours.

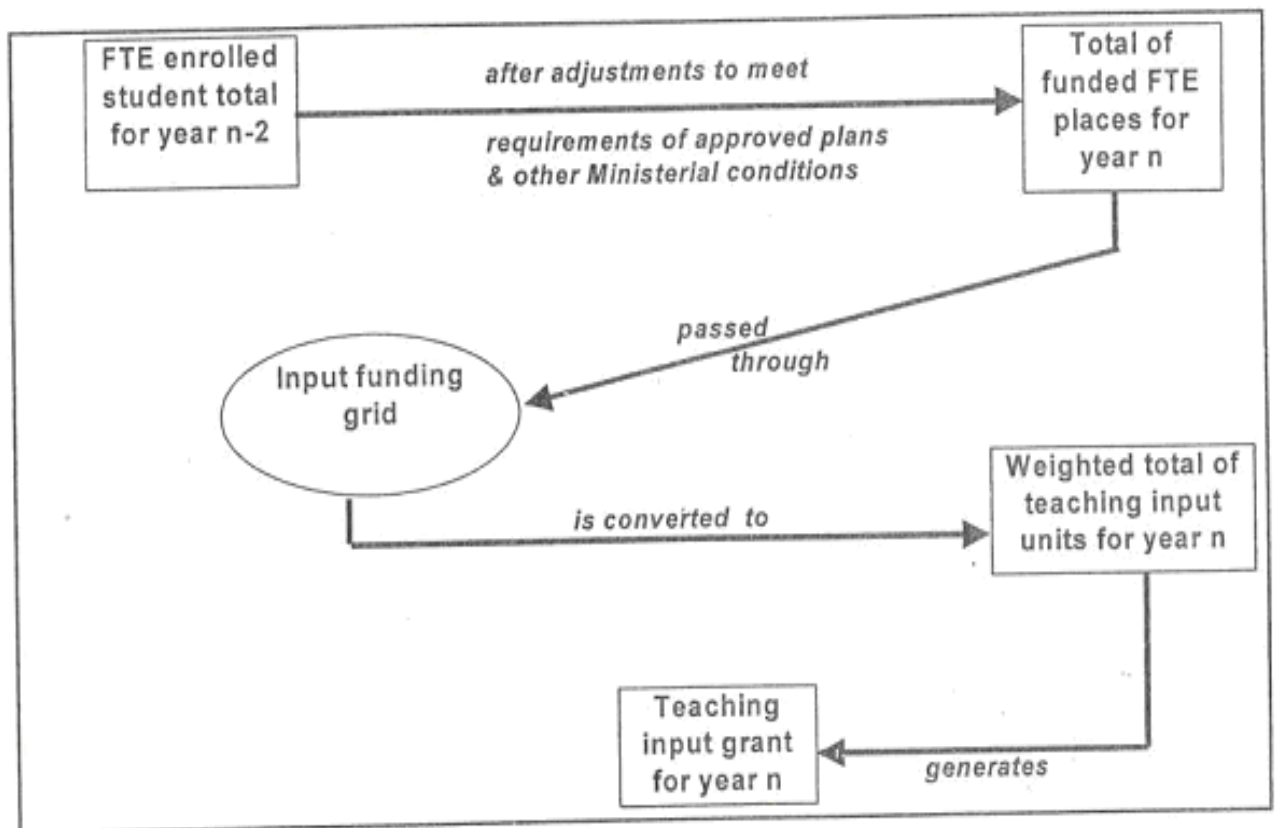
### ***Value of an FTE***

The value of an FTE is One (1) for both contact and distance students. Any other student registered with an institution who does not satisfy the standard definition is awarded a value of 0.5.

### ***Determining an Institution's Teaching Input Grant (i)***

The calculation of an institution's teaching input grant for year n begins with a determination of the FTE enrolments for year n-2. The FTE totals are then weighted according to funding group, course material, course level, and instruction delivery mode to give a weighted total for the institution. The weighted total is then used to determine the institution's teaching grant as in Figure 2.1.

**Figure 2.1**  
**Process of determining teaching input grant**



Source: Public Funding of Higher Education in South Africa by Means of Formulae1

**FUNDING GROUPS BY CESM CATEGORIES**

Three funding groups were identified as in Table 2.1.

**Table 2.1**

**Funding Groups**

<b>Funding Group</b>	<b>CESM Categories</b>
1	Arts and Humanities
2	Natural & Applied Sciences
3	Health Sciences

Source: Public Funding of Higher Education in South Africa by Means of Formulae1

Note: Education Subject Matter is a dynamic variable which will be reviewed from time to time according to national needs.

**Weighting Matrix for Teaching Inputs**

The weighting matrix is based on the relative cost of training a student in the various funding categories. The weighting matrix is summarized in Table 2.2.

**Table 2.2**

**Weighting Matrix**

<b>Funding Groups</b>	<b>Ratio</b>	<b>Undergraduate</b>	<b>Honours</b>	<b>Masters</b>	<b>Doctoral</b>
		<b>Contact/ Distance</b>	<b>Contact/ Distance</b>	<b>Contact/ Distance</b>	<b>Contact/ Distance</b>
Humanities and Arts	1	1	1.2	2	3
Hard/Physical/ Natural Sciences	5	5	6	10	15
Health Sciences	10	10	12	20	30

Source: Public Funding of Higher Education in South Africa by Means of Formulae 1

**The Teaching Input Grant Formula**

The teaching input grant is determined through the following formula:

$$i = \frac{a}{A} * I$$

Where

- *i* is an institution’s teaching input grant
- *a* is the weighted teaching input total for the institution
- *A* is the sum of the weighted teaching inputs for all institutions(  $\sum_{i=1}^{i=9} a_i$ )
- *I* is the resources allocated to institutions for teaching inputs

**Teaching Output Grant**

A teaching output grant for year n is the amount of resources allocated to an institution on basis of weighted non-research graduates and diplomates produced in year (n-2).

The actual total of non-research graduates and diplomates for year (n-2) are weighted using the factors shown in Table 2.3.

**Table 2.3**  
**Weighting Factors for Teaching Output**

<b>Weighting factors for teaching outputs</b>	
1 <sup>st</sup> certificates and diplomas of 2 years or less	0.5
1st diplomas and bachelor's degrees: 3 years	1.0
Professional 1 <sup>st</sup> bachelor's degree: 4 years or more	1.5
Postgraduate and post diploma diplomas	0.5
Postgraduate bachelor's degrees	1.0
Honours degrees/higher diplomas	0.5
Non-research masters degrees and diplomas	0.5

Source: Public Funding of Higher Education in South Africa by Means of Formulae 1

***The Teaching Output Grant Formula***

The teaching output grant is determined through the following formula:

$$o = \frac{c}{C} * O$$

Where

- *o* is the teaching output grant for each institution
- *c* is the weighted teaching output total for an institution
- *C* is the total weighted teaching output for all institutions ( $\sum_{i=1}^{i=9} c_i$ )
- *O* is the resources allocated to institutions for teaching output

***Research Output Grant***

The research output grant is the amount of resources allocated to an institution for research based on the following:

- (a) The actual totals of research graduates and research publication units for year (n-2) and
- (b) The number of potential researchers in an institution.

Thus the research output grant has two components:

- (a) Actual research done reflected in publications.
- (b) Research Development allocation meant to promote research.



Research publications shall be classified using the following internationally accepted ratings

Table 2.4:

**Table 2.4:**

**Weighting Factors for Research Output**

<b>Category</b>	<b>Description</b>	<b>Weighting</b>
<b>Cat 1</b>	Articles in international peer reviewed journals	5
<b>Cat 2</b>	Articles in national peer reviewed journals	4
<b>Cat 3</b>	Conference proceedings (full paper)	3
<b>Cat 4</b>	Conference abstracts	2
<b>Cat 5</b>	Chapters in books (based on peer review)	5
<b>Cat 6</b>	Books with international distribution (author or editor)	10
<b>Cat 7</b>	Working/technical papers/popularising literature/articles in national journals, electronic journals etc.	1
<b>Cat 8</b>	Conference contributions (posters, lectures)	2
<b>Cat 9</b>	Patents	7
<b>Cat 10</b>	Master Research Graduate	4
<b>Cat 11</b>	Doctorate Research Graduate	6
<b>Cat 12</b>	Other	0.5

$$r = \left(\frac{p}{P} * \frac{S}{s}\right) * Q + \frac{s}{S} * RD$$

Where

- $p$  is weighted research output for each institution
- $P$  is total weighted research output for all institutions ( $\sum_{i=1}^{i=9} p_i$ )
- $s$  is weighted potential researchers ie full time teaching staff
- $S$  is the total weighted potential researchers ( $\sum_{i=1}^{i=9} s_i$ )
- $Q$  is the resources allocated to institutions for research output
- $RD$  is the resources allocated to institutions for research development

### ***Institutional Factor Grant***

The institutional factor grant is the amount of resources allocated to an institution to:

- Promote gender equity
- Support the disabled
- Boost resources of smaller institutions to achieve the minimum operating standards
- Assist institutions to provide teaching and learning space

f = gender + disability + size + rented space factor

$$gender = \frac{g}{G} * \frac{fs}{FS} * Gender\_grant$$

Where

- g is weighted gender factor for each institution (females/males)
- G is total weighted gender factor for all institutions
- fs is the number of female students in an institution
- FS is the number of all female students in all institution

$$disability = \frac{d}{D} * \frac{ds}{DS} * Disability\_grant$$

where

- d is weighted disability factor for each institution
- D is total weighted disability factor for all institutions
- ds is the number of disabled students in an institution
- DS is the total number of disabled students in all institutions

Rented space factor = rs/RS \* Rented Space grant

where

- rs is the weighted space factor for an institution
- RS is the total weighted space for all institutions

The size factor takes into account economies of scale as the FTE enrolment size of an institution increases, thus awarding additional teaching input grants to small institutions. The institutional size factor grants are indicated in Table 2.5:

**Table 2.5**

**Institutional size factor grants**

<b>Total FTE student enrolment</b>	<b>Institutional size weighting</b>
0 to 1000	15
1001 to 5000	11
5001 to 10 000	5
10001 and above	0

Source: Public Funding of Higher Education in South Africa by Means of Formulae<sup>1</sup>

The use of a funding formula has resulted in the allocation of public resources to state universities in a more scientific, objective and goal oriented way.

Pillay (2008) identified financing practices that address the inadequacy of public expenditure as follows:

**Private Public Partnership**

He noted that in order to address the issue for scarce resources, some countries are establishing new universities on a private public partnership basis. The state avails substantial funding for capital expenditure while the private sector will be responsible for operating expenditure. Pillay (2008) noted that two leading states which had adopted the model are Botswana on its second university in Francis town and Zambia at the Mulungushi University.

**The differentiated government funding model**

In this model the government provides funding depending on the nature of institution. He further noted that institutions yielding high private returns such as universities of technology receive lower fund levels compared to institutions yielding greater social returns such as teacher, education or humanities. He noted that States like Mauritius have already adopted the approach.

**Cost sharing**

Bloom et'al (2005) identified countries like Namibia, Mauritius, Zambia and Tanzania had introduced cost sharing in the form of tuition fees to address the inadequacy of institutional

revenue. The system of fee paying in higher education is applied by South Africa. He noted that the scheme is not performing to expectations due to the system of dual tracking used by some countries.

### **Differentiated and Privatisation**

Taferra and Altbach (2004) noted that although gross tertiary enrolment in Africa remains the lowest compared to other regions, the rate of increase in the last decade has been regarded as the highest of all the regions of the world. They further noted that the existing public institutions were failing to meet the increasing and diverse demands for higher education, including lifelong learning. In this regard many countries are undertaking systems deregulation and differentiation instead of establishing new public institutions.

Some improvements on funding in this area can be by opening non-profit and for profit private institutions. On this mode of provision can be diversified with both new and some of the public institutions offering distance education and open learning thus enhancing access opportunities of students. The distance education offering yields benefits, such as addressing lifelong learning needs, cost efficiency, curriculum flexibility, and adaption to post graduate training for working students, potential for training on HIV/AIDS and many more. They noted that most countries are facing challenges of expanding such as lack of policy and poor communication infrastructure, lack of experience, appropriate teaching materials, and poor quality of learner support services can be avoided.

Chilundo (2003) noted that unlike public institutions, the private institutions are concentrated in urban areas and focus on low cost vocational and commercial programs, including short duration tailor made courses that target the job market and hence attracted high fee paying students. The private institutions do not cross subsidise programs that have a lesser market demand such as basic research, the humanities and laboratory based science subjects that require higher investment.

Most private higher education institutions also depend on part time teachers that are often drawn from the public higher education institutions. Chilundo (2003) further argued that by avoiding the cost hiring full time staff and by using the services of teachers from the public institutions, private institutions benefit from public subsidies. Similarly, through teachers, they are also in a position to build their image and reinforce their competence edge, quality as they can also argue that they have well experienced teachers who can assure the quality.

On a similar issue teachers also benefit by earning extra income. Chilundo (2002) noted that regulatory policies on licencing private institutions need to address the issue of ensuring that teachers are always available for mentoring young staff on research and assignments.

Teffra and Altbach (2004) noted that contribution of private Higher Education to development priorities can be enhanced through the creation of an enabling and supportive environment. This includes access to loans allowing students on government scholarship to enrol in private institutions, tax holidays and tax exemptions for imports of educational materials, access to free or low cost land for construction of buildings in areas. However, such public support to private higher institutions may have to be proportional to their inputs in addressing issues of equity especially opening of access opportunities to those living in underdeveloped or peripheral regions, contribution to development of human resources in key areas such as applied science and health science.

On the same note, Teffra and Altbach (2004) further noted that opening of the education sector to private participation has also paved way for cross boarder provision. This form of provision involves both public institutions from within Africa, such as University of South Africa, and other providers, both for profit and public, that are based in the West that have either partnerships with local ones or have branches in Africa. Similarly, Chilundo (2003) emphasized the need to ensure quality.

Teffra and Altbach (2004) noted that efficient management and administrative systems are of paramount significance to the productivity and effectiveness of any enterprise, for which academic institutions are no exception. Poorly trained and poorly qualified personnel, inefficient, ineffective and out of date management and administrative infrastructures and poorly remunerated staff are the norm throughout many systems.

They further noted that accounts of serious corruption charges and embezzlement of funds in African Universities were common. Some blame misappropriation of funds in African Universities and poor prioritisation as one of the factors for financial difficulties in the Universities. Teffra and Altbach (2004) noted that crisis in Kenya public Universities for instance was worsened by the misappropriation of the scarce resources as students continue living and studying under deplorable conditions, while top administrators in the Universities are regularly accused by the national Auditor General's office of mismanaging funds and gaining misplaced priorities. During (1995-1996) fiscal year it was reported that Masemo University lost over US\$660 000, most of it through theft and false allowance payments.

## **2.7 Summary**

This chapter covered the related literature on funding system, funding definitions, implementation of funding system, funding process, sources of funding, categories of funding for state universities, tuition fees, research contracts, control of funding system, future funding of higher education, private public partnership, differentiated government funding model, cost sharing, differentiated and privatization, and control measures of funding system.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter focuses on the research methods used in data collection. It describes and justifies the research design used, describes instrument, and the reason for choosing it.

#### 3.1 Research Philosophy

Research is the systematic process of collecting and logically analysing information in order to provide answers to questions and solutions to prevailing problems. Leedy (1985:04) says “research is the manner in which we attempt to solve problems in a systematic effort to push back the frontiers of human ignorance or to confirm the validity of the solutions to problems” Babbie (1999) concurred by stating that research philosophy is a scientific way of investigating a phenomenon and coming up with data, which can be analysed, to come up with logical position. However data, collected need to be measurable in order to relate it to the problem or factor under investigation. According to Leedy (1985:18) the basic approach is that “if it exists, then it exists, then it is measurable ..... data must be qualified and evaluated against a standard of one kind or another or the data are useless to the researcher”. Thus data can be either quantitative or qualitative. But ultimately, these must result in a mathematical value or equivalent of a mathematical value. Dick and Swepson (1997) argue that good research is research which uses a methodology which fits the situation and the goals being pursued. The technological aspects that will guide the research process are research design, population sample and sampling techniques; data collection instruments; issues of validity, reliability, trustworthiness and ethical considerations.

#### 3.2 Research designs

Maree (2007) defines research design as a plan or strategy which moves from the underlying philosophical assumptions to specifying the selection of respondents, data gathering techniques to be used and data analysis. According to Gelo et al. (2008) a research design is the plan of action or structure, which links the philosophical foundations and the methodological assumptions of a research approach to its research methods. The plan that outlines activities to be involved in the collection and analysis of data for a particular study

should have a guidance of the proposed work plan (Borg and Gall, 1989). The research design is the cornerstone in getting answers to the questions to be investigated.

Research design is the plan of action to be taken in the research process that include the data collection, presentation, analysis and answer the research questions which would have been raised in the early stages of the research.

Tichapondwa (2010) states that there are four designs at the researcher's disposal as follows: descriptive; case study; correlation and experimental. The research design for this study was the descriptive survey.

### **3.2.1 Descriptive survey**

Leedy (1997) describes the descriptive survey research design as the design which reveals the actual picture of a situation through the emerging trends from the study. The descriptive survey design is the collection and reporting of data on organizations, programmes and processes. It aims at unearthing data that sometimes lay buried deep within the minds of the people through the use of observation techniques. Three important techniques used in descriptive survey method are questionnaire, structured interview and recording of data.

The descriptive survey research design enables the researcher to obtain in-depth information, which can be used to facilitate the generalisation of one's findings to the larger population (Tichapondwa, 2013). There is need to randomly select or sample a small group of respondents within the population who have the characteristics that are identical to the larger population from which it is selected.

The researcher should be personally detached from those being studied through using objective instruments such as standardised questionnaires, observation schedules and interview guides to collect data (Tichapondwa, 2013). The survey questionnaires collect respondents' perceptions to the phenomenon under study through structured closed-ended items, or questions with pre-determined multiple-choice responses and unstructured open-ended questions.

The merits of descriptive survey design are as follows: comprises valid and reliable data; reveals trends; innovative and charts new directions; contributes to what is already known and has validated measurement tools.



The demerits are: tells nothing new; simply reports what was done and why; boring; nothing creative or ambitious about the description; and rudely developed instruments.

### **3.2.2 Case study design**

The case study is often taken to be synonymous with qualitative methods which closely look at the world of alternative perceptions, different views, shared tasks and workplace contexts. The case study design is in-depth study of one project or one subject, presented in narrative form. According to Tichapondwa (2013) the following are characteristics of a case study design:

A type of qualitative research in which the researcher explores a single entity or case within its real life context, bounded by time and activity. It collects detailed information through a variety of data collection procedures during a certain period of time. The design is based on a naturalistic approach where the researcher develops a, complex, holistic picture, analyses documents and detailed views of informants and conducts the study in its natural setting. It deals with contemporary events and is concerned with how and why things happen. It strives to provide vicarious feeling of 'being there' within its real life context to the reader. A unit of human activity embedded in the real world which can only be studied or understood in that context. This implies that a case can be a single individual, a group such as a family or an institution such as a school or a community likely to have an idiosyncratic set of values, feelings and beliefs that can only be discovered through intensive, interactive study of that individual entity. It is mainly qualitative in nature, it is a single entity like a classroom, a programme, a course or an institution. It is confined to a period of time, employs multiple data collection techniques, calls for the researcher's physical presence and seeks to explain current phenomena.

#### **The merits of case study**

As an exhaustive study of a social unit, it enables to understand fully the behaviour pattern of the concerned unit. The researcher can obtain a real and enlightened record of personal experiences which would reveal man's inner strivings, tensions and motivations that drive him to action along with the forces that direct him to adopt a certain pattern of behaviour. It enables the researcher to trace out the natural history of the social unit and its relationship with the social factors and the forces involved in its surrounding environment. It helps in formulating relevant hypotheses along with the data which may be helpful in testing them.

The method facilitates intensive study of social units which is generally not possible if we use either the observation method or the method of collecting information through schedules. Information collected under the case study method helps a lot to the researcher in the task of constructing the appropriate questionnaire or schedule for the said task requires thorough knowledge of the concerning universe. The researcher can use one or more of the several research methods under the case study method depending upon the prevalent circumstances. It has proved beneficial in determining the nature of units to be studied along with the nature of the universe. It enhances the experience of the researcher and in turn increases analysing ability and skill.

### **The demerits of case study**

The case situations are seldom comparable and as such the information gathered in case studies is often not comparable. The danger of false generalisation is always there in view of the fact that no set rules are followed in collection of the information and only few units are studied. It consumes more time and requires lot of expenditure. The method is based on several assumptions which may not be very realistic at times, and as such the usefulness of case data is always subject to doubt. It is used only in a limited sphere and not possible to use it in case of a big society.

### **3.2.3 Correlational Research Design**

The correlational research design is one which seeks to establish the degree of variation between two factors or variables. The degree of variation is generally measured through some statistical correlation coefficient (Cohen and Manion, 1994). The collection of data is done on two or more sets of data from a group of respondents. The data is subjected to statistical analysis using measures like the Spearman's Rank Order Correlation or Pearson's Product-Moment Correlation to compute the correlation coefficient between or among the variables but simply sample observed behaviours. The design is compatible with quantitative research.

### **The merits of correlational studies**

It assists to confirm or refute suspected relationships between or among the variables. They help the researcher to confidently predict the flow of events from a close analysis of one set of related events.

### **The demerits of correlational studies**

The correlation is dynamic rather than static (Cohen and Manion, 1994). This means that variables that at some time appear to be related may at some other stage show no correlation. The conclusions you draw from such studies may be relatively temporary. The results are also influenced by multiple interfering variables, which may have greater influence than the central variables.

### **3.2.4 Experimental Research Design**

The experimental research design is known by the various names such as ‘cause and effect’, ‘pretest-post test control group design’ and the laboratory method. Experimentation in education has become widely used, hence different variations of the experimental design are used in education to address causal processes (Tichapondwa 2013). In choosing the experimental design you will be able to manipulate and control a condition or variable whose effects you seek to understand, called the independent variable. The experiment also wants to discover its effects upon some consequent variable, usually known as dependent variable. The experimental design seeks to identify possible cause and effect relationships through exposing experimental groups to treatment conditions and comparing the results to control groups not receiving the treatment.

#### **The merits of experimental research design**

It manipulates the independent variable to determine its effect on the dependent variable. The subjects are assigned to experimental and control groups. The systematic selection of subjects is to eliminate bias.

#### **The demerits of experimental research design**

It uses crudely developed instruments in carrying out research study. There is descriptive presentation and has poor control.

Borg and Gall (1993) assert that surveys are excellent vehicles for the measurement of attitude and orientations prevalent in large population. The descriptive survey design is suitable for the research as it sought to establish the effects of current levels of funding systems and effects of strategic adopted by state universities in Zimbabwe.

### **3.3 Population**

A population is any target group of individuals that has common characteristics that are of interest to you, the researcher (Best and Khan, 1993; Tuckman, 1994). Kidder (1981:59) defines “population as an aggregation of people to which we wish to generalise”. On the same note, Miller and Wilson (1993) define the aggregate of all cases that confirm to some designated set of specifications. For the purpose of this study population relates to the entire group of middle managers, academic student representatives and personnel in bursar’s department. There are two types of population namely, the target population and study population.

The target population refers to the units, which was involved in actual research. Gall et’al (1996:220) sums up this approach by saying, “the larger group they wish to learn about is called the population and the smaller group they actually study is called a sample (or targeted population)”

In this study, the target population refers to the entire population to which the results will be generalised. In this case, the study population referred to the total number of staff in administration, bursar’s office, academic departments and student unions of state universities in Zimbabwe. State universities operating on conventional basis are eight with each having approximately twelve senior managers in administration and the bursar’s department made of approximately five senior members of staff and other supporting staff for which the total number is around one hundred and fifty four.

#### **Stratification of population**

The procedure involves ensuring that every section of the population is included. It can be through the consideration of race, age, rank or grade. Gall et’ al (1996:26) says, “stratified sampling involves selecting a sample so that certain subgroups in the population are adequately represented in the sample. The same sentiments are also echoed by Leedy (1985:156) who asserts that, “the population, instead of being a homogenous mass, is composed of layers (strata) of discretely different types of individual limits”.

In this study State Universities are classified as large and small. The group under large, consist of those State Universities with enrolments above six thousand and small as those Universities with enrolments above six thousand and small as those Universities with enrolments below six thousand students.

### 3.4 Sample size

A sample is a group of cases (individuals) selected from all the possible respondents in a population in which the study is being conducted. Millar and Wilson (1983:39) defines a sample as “group selected from a large population with the aim of yielding information about the population as a whole”. In most instances there is shortage of financial resources, time and accessibility to study all the cases in the population of interest, making it necessary for you to collect information from a representative sample. The distribution of cases of the total population in such a way that the knowledge gained is representative of the entire population under study and allows for accurate generalisations to the total population (Babie, Mouton, Vorster and Prozesky (2001); Cohen, Manion and Morrison, (2006). In this study State Universities were classified as large and small. The large group consisted of those State Universities with enrolments above six thousand and small as those Universities with enrolments below six thousand students. Fifteen senior and ten middle employees from the named departments were taken from each group of the State Universities.

According to Van Dalen (2008), if the phenomena under study are homogeneous, a small sample is sufficient. Of further considerations are that State Universities have a pyramid employee structure base hence the number of senior officers in the organisation was small. Leedy (1985:152) concurs, “Obviously, if the population is markedly heterogeneous, a large sample would be needed than if the population is more nearly homogeneous”.

Consideration of this argument, a sample of fifteen senior and ten middle employees offers a reasonable sample since the population under study was homogeneous due to similarity of duties and task performed by senior and middle managers in the organisation. However, the sample size need to be too small so that the research findings may end up divorced from the actual research.

According to Borg and Gall (1983:257), “the general rule is to use the largest sample possible”, this is so because although we generally study only samples, we are really interested in learning about the resultant conclusions to be drawn from the findings. In this study twenty five senior and middle employees were sampled from each group of State Universities, which is about twenty percent of the target population.

### **3.5 Sampling procedure**

According to Dooley (1990), sampling does not consist of collecting data casually from any conveniently selected units, to obtain a representative sample; one systematically selects each unit in a specified way under controlled conditions.

Cooper (2003) goes further by identifying two types of sampling named probability sampling and non- probability sampling. The non-probability sampling methods has a lot of limitations but are frequently used despite the limitations. They are convenient and involved low costs and as a result they are fast becoming popular in search studies. The main types of non-probability sampling methods are convenient, quota purpose, dimensional and snowball sampling.

In probability sampling, every element in the population had an equal chance of being included in the sample. Because of this factor, the results could easily be generalised to the entire target population. The major disadvantage of probability sampling is that it requires a sample from the target group and it is time consuming. The probability sampling method describes random sampling method as a selection of a part of the whole population in such a way that the characteristics of the entire population of the sample approximate the board characteristics inherent in the total population.

To choose the sample, all those with three or more years for employment in State Universities in relevant departments were given the opportunity to participate. Where the number was too large cards were used in some with some written no and some yes. Yes meant that one could be given a questionnaire while no meant no participation. All employees concerned were given a chance to pick a card until the final numbers were chosen.

### **3.6 Sampling Methods**

According to Tichapondwa (2013) there are two kinds of sampling, namely: probability and non-probability sampling.

#### **3.6.1 Probability Sampling**

Probability sampling is based on randomisation in which every element of the population has a known chance of being included in the sample. The probability sampling encompasses

simple random sampling, stratified random sampling, cluster sampling and systematic sampling.

### **Simple Random Sampling**

The simple random sampling ensures that each element of the population has an equal chance of being included in the sample. The use methods such as Roulette wheel, lottery, the computer, picking from a hat and the table of random numbers that ensure that each participant has an equal chance of being selected. Equal chance of selection implies that there should be equal representation of all elements of the entire population.

Suppose selecting a sample of 30 participants out of 100. All the hundred entries in the population are numbered and placed corresponding number of slips of paper in a hat or some container where they are mixed thoroughly. When a slip is drawn its number is recorded and the slip is put back in the container. When a previously drawn number is drawn again, it is ignored and put back into the container. The process is repeated until the desired sample size is achieved.

### **Stratified Sampling**

The stratified sampling divides the population into two or more strata or layers and takes either a simple random sample or a systematic sample for each stratum. An education researcher using stratified sampling would organise the respondents as Education Officers, Head of Schools, Senior Teachers and Classroom Teachers.

### **Cluster Sampling**

Cluster sampling is a version of simple random sampling that applies to large populations that are spread over large geographical scatterings. Cluster sampling is useful where it is difficult or impossible to involve all the elements in a large population. For example when studying trends in schools in a country, sample equal numbers of schools or districts from each province, which is a geographical cluster. According to Williamson, Karp and Dalphin (1977) indicate that once a sample of clusters has been selected, simple, systematic or stratified random sample of individual elements can be selected from the chosen clusters. In cluster sampling, you only list relevant elements and not the complete list of all the elements in the population. The precision of cluster sampling is less than that of other probability samples and can be improved by selecting a larger sample size. Cluster sampling saves time

and money as a few researchers can be sent to a few randomly selected areas where they interview a substantial number of participants in each.

### **Systematic Sampling**

Systematic sampling is similar to simple random sampling. The systematic sampling identifies a random starting point on the population list and thereafter select every nth or unit from that starting point. A selection interval can be ten, meaning that every tenth character is selected for inclusion in the sample. The process is continued until the sample is adequate.

### **3.6.2 Non- probability sampling**

Non-probability sampling could be referred to as unscientific. The most important types of non-probability sampling are accidental, quota and purposive.

#### **Convenience Sampling**

Convenience sampling, also known as accidental sampling, is the familiar ‘man in street interview’. The accidental sampling is applied by standing in street corners and interview people as they pass by and make wide use of volunteers. It is highly biased and only suitable where data collection is only complex and very low level of generalisation is expected. The assumption carried by accidental sampling is that by simply interviewing passers-by, researchers get a reasonably representative cross-section of the population of interest. There is no guarantee that it is going to be the case as there is no reliable way of checking the reliability of a sample under accidental sampling. As such caution must be exercised about generalising findings under accidental sampling.

#### **Quota Sampling**

A quota sample is when interviewers screen potential respondents according to study’s desired characteristics. A study might seek for equal representation of men and women, hence the quota sampling might call for 50% of the interviewees are female and another 50% is males. Should the study have to do with races, the quota sampling might demand that 50% of interviewees be white and the other 50% be black. The quota sampling ensures that a certain strata of the population will be included in the study. Interviewers are afforded a large



degree of latitude in quota sampling which gives too much room for biased sampling as they provide room for interviewers to choose the kind of females or males they prefer to interview.

### **Purposive Sampling**

A purposive or judgmental sample is selecting based on the knowledge of a population and the purpose of study. It is used so that individuals are selected because of some defining characteristic that makes them the holders of specific data needed for the study (Maree, 2007). The purposive sampling is hand-picking certain groups or individuals to include in the sample on the basis of their relevance to the problem under study. According to Patton (1990) the logic and power of purposeful sampling lies in selecting information-rich cases for in-depth study. Information-rich cases are those from which you can learn a great deal about the phenomenon being studied. It is used in studies that are too rare to effectively deal with when using a representative cross section of the population. The sampling reduces traveling cost involved when collecting data from the geographical spread respondents and enables to draw some specific information from the respondents who are crucial to the study and may be hard to relocate. The main disadvantage with purposive sampling is that there is little or no control over who is selected within the category and there is no guarantee that those selected are representative of the specified population.

### **Snowball Sampling**

A snowball sample is appropriate to use in research when the members of a population are difficult to locate, such as homeless individuals, migrant workers or undocumented immigrants. A snowball sample is one in which the researcher collects data on the few members of the target population he or she can locate, then asks those individuals to provide information needed to locate other members of that population whom they know. For example, if a researcher wishes to interview undocumented immigrants from a particular he or she might interview a few undocumented individuals that he or she knows or can locate and would then rely on those subjects to help locate more undocumented individuals. The process continues until the researcher has all the interviews he or she needs until all contacts have been exhausted.

### **Time, Place and Event Sampling**

These are not sampling techniques like purposive or simple random sampling, but are other considerations when sampling. One can sample times and places for observation. If possible

the observer would break the 24-hour day into discrete time units and let the times of observations be dictated by a random sampling of these time units.

Activities and events also vary in different places within an organisation, hence one might need to carry out observations in different strategic locations within the organisation, (Williamson et. al 1997). For example, as a researcher needs not only observe the activities of teachers teaching in the classroom as they are likely to be different when teaching outdoor lessons where a lot of practical engagement and demonstration are required. It might be acceptable in some activities to combine the sampling of time and place where research will be conducted.

### **3.7 Types of Data**

There are two types of data: primary and secondary. The researcher would have to select one or the other method of data collection to use in the study. The methods of collecting primary and secondary data differ since primary data are to be originally collected, while in case of secondary data the nature of data collection work is merely that of compilation (Kothari, 2004).

#### **3.7.1 Primary Data**

The primary data are is data which is collected afresh and for the first time, and thus happen to be original in character. Vermeulen (1998) noted that primary data is data obtained from the horse's mouth. There are several methods of collecting primary data, particularly in surveys and descriptive researches which are: observation method, interview method, through questionnaires and through schedules. The other methods are warranty cards, distributor audits, pantry audits, consumer panels, using mechanical devices, through projective techniques, depth interviews and content analysis. The data was obtained directly from the sampled units. The information from primary source was meant for the current research as it tries to unlock new knowledge. Questionnaires, observations and interviews are techniques used to obtain primary data. This study specifically made use of interviews and questionnaires.

### **The merits of primary data**

The primary data are original and relevant to the topic of the research study so the degree of accuracy is very high. It can be collected from a number of ways like interviews, telephone surveys, focus groups and across the national borders through emails and posts. It can include a large population and wide geographical coverage. Moreover, primary data is current and it can better give a realistic view to the researcher about the topic under consideration. Reliability of primary data is very high because these are collected by the concerned and reliable party.

### **The demerits of primary data**

According to Kothari (2004) outlined the demerits of primary data as follows:

The collection of primary data where interview is to be conducted the coverage is limited and for wider coverage a more number of researchers are required. A lot of time and efforts are required for data collection. By the time the data collected, analysed and report is ready the problem of the research becomes very serious or out dated. So the purpose of the research may be defeated. It has design problems like how to design the surveys. The questions must be simple to understand and respond. Some respondents do not give timely responses. The respondents may give fake, socially acceptable and sweet answers and try to cover up the realities. The cost of the data collection goes high where more people, time and efforts are involved. In some primary data collection methods there is no control over the data collection. Incomplete questionnaire always give a negative impact on research. The trained persons are required for data collection. In experienced person in data collection may give inadequate data of the research.

### **3.7.2 Secondary Data**

The secondary data is data which has already been collected and have already been passed through the statistical process. The data collected by a party not related to the research study but collected these data for some other purpose and at different time in the past. If the researcher uses these data then these become secondary data for the current users. These may be available in written, typed or in electronic forms. A variety of secondary information sources is available to the researcher gathering data on an industry, potential product applications and the market place. It is also used to gain initial insight into the research problem. Secondary data is classified in terms of its source – either internal or external.

Internal, or in-house data, is secondary information acquired within the organization where research is being carried out. External secondary data is obtained from outside sources.

### **The Merits of Secondary Data**

The secondary data is cheaper and faster to access. It provides a way to access the work of the best scholars all over the world. The secondary data gives a frame of mind to the researcher that in which direction should go for the specific research. It save time, efforts and money and add to the value of the research study.

### **The Demerits of Secondary data**

The data collected by the third party may not be a reliable party so the reliability and accuracy of data go down. The data collected in one location may not be suitable for the other one due variable environmental factor. With the passage of time the data becomes obsolete and very old. The secondary data collected can distort the results of the research. When using secondary data a special care is required to amend or modify for use. It can also raise issues of authenticity and copyright (Tichapondwa, 2013).

### **Desk Research**

The bulk of the research material relating to theories and practices of on project financing has been obtained from various books, papers, articles, electronic journals, annual budgets, management accounts and annual financial statements. Desk research is the key engine of research which is based on existing knowledge and that it lowers the research costs as data is readily available, however the study noted that secondary data often lack relevancy to current studies, as it may be out dated and a high risk of data being inaccurate and incomplete and not subject to further manipulation.

## **3.8 Research Instruments**

The questionnaire and interviews were chosen as primary methods of data collection because there were original in nature and data collected is first-hand information for the study.

## **Questionnaires**

Sekaran (2000) as quoted by Saunders et al, (2003) defines questionnaires as a set of questions to which respondents record their answers. Saunders et al, (2003) comment that questionnaires are used with great success in descriptive surveys. Cohen and Manion (1994), on a similar note view the questionnaire as any data collection instrument comprising of “checklists” attitude scales, projective techniques rating scales and others. Questionnaires were administered onto the university staff and student union leaders of sampled state universities. The questionnaires covered aspects such as general qualifications of staff in state universities to test knowledge when discharging their duties.

Best and Kahn (1970) also noted that questionnaires are of two types namely an open type questionnaires and closed type questionnaire.

The questionnaires were used as they were self-reporting and were able to measure the individual’s attitudes, beliefs and perceptions which other instruments would not, due to this subjective nature. They were also chosen as they saved time and money, thereby enabling respondents not to be influenced by the presents of the interviewer or workmates thus giving maximum private to respondents enabling maximum confidentiality. The questionnaire survey also gave the research the capacity to speedily collect large amount of data from a number of subjects even if they were wide spread geographically and this was also necessitated by the fact that questionnaires were easy to construct and administer. Similarly questionnaires were found to have the capacity to provide factual items to be used to determine the real background information of the subject such as age, gender, position, qualification and years of experience. Finally questionnaires used composed of closed as well as open ended questions from which the respondents were required to give brief and specific response. The research included open ended questions so as to give the respondents the opportunity to specify other attributes peculiar to each person as demanded by the question. On a similar note open ended questions provided varied data since one could say what one meant in one’s own words and expression thereby further allowing respondents not to be blinkered as they decided answers on their own.

## **The Merits of Questionnaires**

The questionnaires collect the appropriate data for the research study. They make data comparable and amenable to analysis. It minimizes bias in formulating and asking questions for research study. It makes questions engaging and varied.

## **The Demerits of Questionnaires**

The use of questionnaires provided challenges to the study in that they did not provide room for probing. This was due to the absence of personal interaction, and the mail questionnaire did not give the opportunity to seek clarification on vague answers given by the respondents especially on open ended questions and that they had a low response rate as people did not feel compelled to complete and return the questionnaire due to personal commitments or lack of interest (Kothari, 2004).

### **3.9 Structured Interviews**

According to Best and Kahn (1970), an interview is a form of questionnaire in which instead of writing responses, the subject gave the required information verbally in a face to face relationship. The reasons for conducting interviews were:

It acts as a follow up to the questionnaires administered as these offset the limitation of traditional questionnaire. Interviews also enable the study to reveal certain types of confidential information that an individual might be reluctant to put in writing as noted by Heppner (1994). Similarly, interviews were also chosen to ensure a high response rate, accurate sampling and a minimum of interview bias while providing necessary explanations thereby giving maximum benefits of a degree of personal contact. Interviews succeed even with respondents who have reading or language difficulties. Interviews were able to collect supplementary information relating to the interviewee's characteristics and he had greater control over the interviewing process by designing questions which allow for further probing.

Challenges of interviews were also noted, and these were that interviews were costly to administer especially when respondents were widely dispersed and that telephone interviews could be terminated by respondents before interviews were completed and also, that most respondents did not want to discuss sensitive information over the telephone.

### **3.10 Types of Questions**

According to Kothari (2004) states that there are two types of questionnaire questions, open-ended and closed-ended. Open format questions or open-ended questions give your audience an opportunity to express their opinions in a free-flowing manner. These questions do not have predetermined set of responses and the respondent is free to answer whatever he/she feels right. By including open format questions in your questionnaire, you can get true, insightful and even unexpected suggestions. Qualitative questions fall under this category. An ideal questionnaire would include an open-ended question at the end of the questionnaire that seeks feedback and/or suggestions for improvements from respondents.

Multiple choice questions, where respondents are restricted to choose among any of the given multiple choice answers are known as closed format or closed-ended questions. There is no fixed limit as to how many multiple choices should be given; the number can be even or odd. One of the main advantages of including closed format questions in your questionnaire design is the ease at performing preliminary analysis. These questions are ideal for calculating statistical data and percentages, as the answers set is known. Closed ended questions can also be asked to different groups at different intervals to efficiently track their opinion about a product/service/company over time. Closed-ended questions can be further classified into seven types. There are seven ways of closed-ended questions in which pollsters can create polling or survey questions for their respondents to collect accurate statistical data (Kothari, 2004).

#### **Leading Questions**

Questions that force your audience for a particular type of answer are known as leading questions. In a leading question, all the answers would be equally likely. An example of a leading question would be a question with choices such as, fair, good, great, poor, superb or excellent. These questions are meant to get an opinion from the audience in limited words (Kothari, 2004).

#### **Importance Questions**

Kothari (2004) states that importance questions, the respondents are usually asked to rate the importance of a particular issue, on a rating scale of 1 to 5. These questions can help you understand things that hold significance to your respondents and allow you make business

critical decisions. An example of importance question would be a question with choices such as, extremely important, very important, somewhat important, not very important or not at all important.

### **Likert Questions (Likert Scale)**

Tichapondwa (2013) indicates that the Summated scales (or Likert-type scales) are developed by utilizing the item analysis approach wherein a particular item is evaluated on the basis of how well it discriminates between those persons whose total score is high and those whose score is low. Those items or statements that best meet this sort of discrimination test are included in the final instrument. Thus, summated scales consist of a number of statements which express either a favourable or unfavourable attitude towards the given object to which the respondent is asked to react. The respondent indicates his agreement or disagreement with each statement in the instrument. Each response is given a numerical score, indicating its favourableness or unfavourableness, and the scores are totalled to measure the respondent's attitude. In other words, the overall score represents the respondent's position on the continuum of favourable-unfavourableness towards an issue. Most frequently used summated scales in the study of social attitudes follow the pattern devised by Likert. For this reason they are often referred to as Likert-type scales. In a Likert scale, the respondent is asked to respond to each of the statements in terms of several degrees, usually five degrees (but at times 3 or 7 may also be used) of agreement or disagreement. An example of a Likert question would be a question with choices such as may respond in any one of the following ways: strongly agree, agree, undecided, disagree or strongly disagree.

### **Dichotomous Questions**

According to Kothari (2004) dichotomous questions are simple questions that ask respondents to answer in a yes or no. One major drawback with dichotomous questions is that it cannot analyse the answers between yes and no, there is no scope for a middle perspective.

### **Bipolar Questions**

Kothari (2004) defines bipolar questions as the ones having two extreme answers written at the opposite ends of the scale. The respondents are asked to mark their responses between those two.



### Example of a Closed-Ended Bipolar Question

**How would you describe the services of XYZ Corporation?**

Efficient ..... X ..... Inefficient

Fast ..... X ..... Slow

Reliable ..... X ..... Unreliable

### Rating Scale Questions

In rating scale questions, the respondents are asked to rate a particular issue on a scale that ranges between poor to good. Rating scale questions usually have an even number of choices, so that respondents are not given the choice of selecting a middle option (Kothari, 2004).

### Example of a Closed-Ended Rating Scale Question

**How would you rate the services of ABC Corporation?**

1 Good      2 Fair      3 Poor      4 Very Poor

### Buying Propensity Questions

Buying propensity questions try to assess the future intentions of customers and determine respondent's buying intention. These questions ask respondents if they want to buy a particular product, what requirements they want to be addressed, and whether they would buy such a product in future (Kothari, 2004).

### Example of a Closed-Ended Buying propensity Question

**If mobile phones had an in-built mp3 Player, would you prefer to buy it?**

1 Deffinitely      2 Probably      3 Probably Not      4 Not Sure      4 Deffinitely Not

### **3.11 Data Collection Procedure**

In order to improve on the response rate the research personally went from one state university to the next included in the sample. Thirty questionnaires were distributed to staff in academic, bursar's department, student union, senior and middle management staff of Universities. The element of anonymity was emphasised during the distribution process so as to reduce the element of bias. The researcher collected the questionnaires seven days after distribution having given respondents ample time to go through all the questions and give well thought-out responses (Tichapondwa, 2013).

### **3.12 Validity and Reliability**

Validity is the strength of conclusions, inferences or propositions. More formally, Cook and Campbell (1979) defines it as the "best available approximation to the truth or falsity of a given inference, proportion and conclusion". Reliability is the consistency of your measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. A measure is considered reliable if a person's score on the same test given twice is similar. On the other hand reliability as defined by Best and Kahn (1993) refers to how consistent is a result from an instrument. An instrument is said to be reliable if it produces similar outcomes when repeatedly applied. The research in order to ensure reliability and validity of the research undertook the following measures:

- Correct use of research instruments. To ensure validity of the research the study used the correct data collection instruments as well as the correct sampling techniques and procedures. Ambiguous questions were avoided to ensure valid answers.
- Triangulation. This is the use of more than one method or research instrument in a study to counter check whether the information collected was genuine or accurate, Sekeran (2000). More than one method was used to collect data to counter check whether the information supplied were genuine. The questionnaire was the main means of data collection, but interviews were also undertaken to ensure reliability of collected data.
- Pilot Testing. To protest reliability and validity of the instrument designed, questionnaires were given to colleagues for proof reading and commenting on any

inconsistencies and areas that were not clear and poorly structured. The colleagues were also involved in a mock completion of questionnaires.

### **3.13 Ethical Considerations**

Ary et al (1985) noted that ethical considerations such as honesty, fairness and respect for integrity and dignity for the respondents and confidentiality of certain information should be taken care of during research. Information obtained through questionnaires and interviews respected the privacy of the respondents since there were no names on the questionnaires. All the information obtained was held with strict confidence and those who responded did so voluntarily without any force being used on them.

Respect was also given to the management as permission was first sort before the study was carried out in the organisations as cited by Gill and Johnson (2002). They stated that the research should consult with all interested parties before undertaking field work and should only proceed by consent and agreement. Any circumstances that might affect the interpretation of the results were clearly reported as highlighted by Barnes (1979).

### **3.14 Data Presentation**

Saunders et al (2003) noted that the simplest way of summarising data for individual variables is to use tables. However, since they do not put visual clues to the lowest and highest values, the use of diagrams was made use of to provide visual clues.

### **3.15 Data Analysis**

A statistical Program for Social Scientists (SPSS) computer program was used for data analysis. Statistical methods of descriptive were used to evaluate the funding system, analyse sources of funding systems and best practices of funding. The research questions therefore were properly answered and research objectives achieved.

### **3.16 Summary**

This chapter looked at methodology, research philosophy, design, descriptive survey, sample design, population, sampling procedure, research instruments and data collection procedures, data presentation and data analysis. The next chapter will be on presentation and analysis of results of findings.

## CHAPTER 4

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.0 Introduction

This chapter was wholly devoted to the presentation, analysis and discussion of findings based on responses from respondents. Data was presented in tables, graphs, and pie charts. The results were discussed and presented under some of the following keys concepts which seen to be the main issues surrounding the research topic.

#### 4.1 Presentation, analysis and interpretation of data

Kothari (2004) states that data, after collection, has to be processed and analysed in accordance with the outline laid down for the purpose at the time of developing the research plan. This is essential for a scientific study and for ensuring that we have all relevant data for making contemplated comparisons and analysis. Fifty questionnaires were distributed to top, middle and low level management of state universities. A total of thirty five questionnaires were returned giving a return rate of seventy percent (70%). The demographic of the respondents was shown and discussed below.

#### 4.2 Respondent by educational qualification

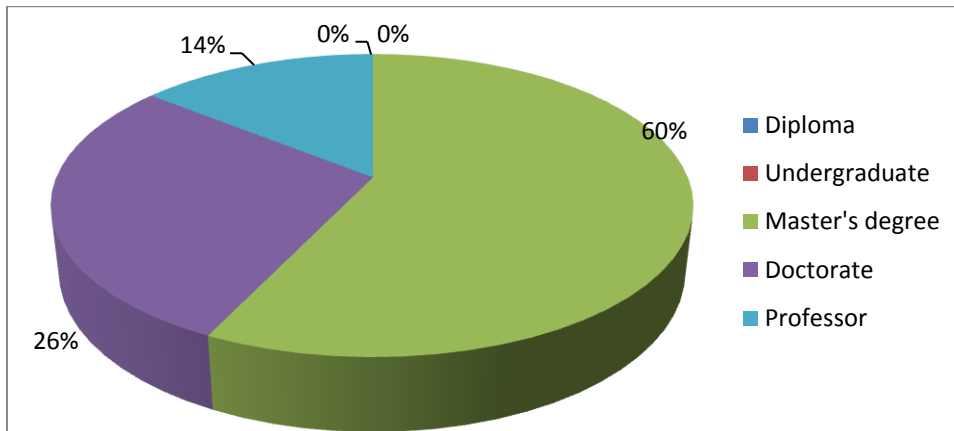
The respondents were asked to show the highest level of qualification attained: diploma; undergraduate; master's degree; doctorate; associate professor and professor. The following table shows the findings of highest level of qualification attained.

**Table 4.1 Qualifications**

	<b>Frequency</b>	<b>Percent</b>
Diploma	0	0.0
Undergraduate	10	28.6
Master's degree	9	25.7
Doctorate	8	22.9
Professor	8	22.9
<b>Total</b>	<b>35</b>	<b>100.0</b>

The pie chart below showed that the majority 21 out of 35 (60%) of the respondents' were master's degree holders; 9 out of 35 (26%) were doctorate holders; 0 out of 35 (0%) diploma; 10 out of 35 (29%) undergraduate and 5 out of 35 (14%) were professors.

**Figure 4.1 Qualification**



Experience in employment in state universities is shown below

The respondents were asked to show the level of relevant experience in universities as tabled below.

**Table 4.2 Experience**

Years	Frequency	Percent
0-2 YRS	0	0.0
2-4 YRS	0	0.0
4-6 YRS	5	14.3
6-8 YRS	4	11.4
8-10 YRS	20	57.1
more than 10 YRS	6	17.1
<b>Total</b>	<b>35</b>	<b>100.0</b>

The results indicate that 26 out of 35 (74%) respondents had at least served in state universities for more than eight years. The results imply that the respondents had acquired knowledge of how state universities were governed.

### 4.3 Sources of funding systems

The scale of 1 represents strongly agreed, 2 represents agreed, 3 represents not sure, 4 represents disagreed and 5 represents strongly disagreed is going to be used for analysis. The respondents rate whether the state universities have funding system for revenue and capital expenditure and results obtained are shown below.

**Table 4.3 Revenue funding system for state universities**

	<b>Frequency</b>	<b>Percent</b>
Valid 1	10	28.6
2	24	68.6
3	1	2.9
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

Findings on revenue funding system for state universities indicate that 10 out of 35 (29%) strongly agreed; 24 out of 35 (68%) agreed; 1 out of 35 (3%) not sure; 0 (0%) disagreed; 0 out of 35 (0%) strongly disagreed. The results show that 34 out of 35 (97%) the state universities had funding system for revenue.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	15	42.9
2	19	54.3
3	1	2.9
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.4 Capital funding system for state universities**

The respondents rate whether the state universities have funding system for capital expenditure and results obtained are shown above. Findings on capital funding system for state universities indicate that 15 (43%) strongly agreed, 19 (54%) agreed, 1 (3%) not sure. The overall results indicate that 34 out of 35 (97%) the state universities had funding system for capital expenditure.

Funding system is formulated by the University Council.

	Frequency	Percent
Valid 1	14	40.0
2	20	57.1
3	1	2.9
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.5 Funding system formulations for state universities**

Findings on funding system formulation for state universities indicate that 14 out of 35 (40%) strongly agreed, 20 out of 35 (57%) agreed, 1 out of 35 (3%) not sure. The overall results indicate that 34 out of 35 (97%) the state university's funding system is formulated by the University Council.

Funding system is documented.

	Frequency	Percent
Valid 1	13	37.1
2	18	51.4
3	3	8.6
4	0	0.0
5	1	2.9
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.6 Funding system documentation for state universities**

Findings on funding system documentation for state universities indicate that 13 out of 35 (37%) strongly agreed, 18 out of 35 (51%) out of 35 agreed, 3 out of 35 (9%) not sure, 1 out of 35 (3%) strongly disagreed. The overall results indicate that 31 out of 35 (88%) the state university's funding system is documented.



Funding system is communicated to accounting function.

	Frequency	Percent
Valid 1	0	0.0
2	10	28.6
3	9	25.7
4	8	22.9
5	8	22.9
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.7 Funding system communicated**

Findings on funding system communicated indicate that 10 out of 35 (28%) agreed, 9 out of 35 (26%) not sure, 8 out of 35 (23%) disagreed, 8 out of 35 (23%) strongly disagreed. The overall results indicate that 25 out of 35 (71%) the state university's funding system is not communicated.

#### 4.4 Implementation of funding systems

Funding system implementation guidelines are in place.

	Frequency	Percent
Valid 1	0	0.0
2	15	42.9
3	10	28.6
4	6	17.1
5	4	11.4
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.8 Funding system implementation guidelines**

Findings on funding system implementation guidelines indicate that 15 out of 35 (43%) agreed, 10 out of 35 (29%) not sure, 6 out of 35 (17%) disagreed, 4 out of 35 (11%) strongly disagreed. The overall results indicate that 20 out of 35 (57%) the state university's funding system implementation guidelines are not in place.

Implementation guidelines are understandable to accounting function.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	15	42.9
2	9	25.7
3	7	20.0
4	4	11.4
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.9 Funding system implementation guidelines are understandable**

Findings on funding system implementation guidelines understandability indicate that 15 (43%) strongly agreed, 9 out of 35 (26%) agreed, 7 out of 35 (20%) not sure, 4 out of 35 (11%) disagreed. The overall results indicate that 24 out of 35 (69%) the state university's funding system implementation guidelines are understandable to accounting function.

Implementation guidelines are comprehensive.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	5	14.3
2	11	31.4
3	8	22.9
4	7	20.0
5	4	11.4
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.10 Funding system implementation guidelines are comprehensive**

Findings on funding system implementation guidelines being comprehensive indicate that 5 out of 35 (14%) strongly agreed, 11 out of 35 (31%) agreed, 8 out of 35 (23%) not sure, 7 out of 35 (20%) disagreed, 4 out of 35 (11%) strongly disagreed. The overall results indicate that 19 out of 35 (54%) the state university's funding system implementation guidelines are not comprehensive.

Personnel to implement guidelines are adequate.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	7	20.0
2	9	25.7
3	7	20.0
4	6	17.1
5	6	17.1
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.11 Personnel to implement guidelines is adequate**

Findings on personnel to implement guidelines being adequate indicate that 7 out of 35 (20%) strongly agreed, 9 out of 35 (26%) agreed, 7 out of 35 (20%) not sure, 6 out of 35 (17%) disagreed, 6 out of 35 (17%) strongly disagreed. The overall results indicate that 19 out of 35 (54%) the state university's personnel to implement guidelines are not adequate.

Personnel to implement guidelines are suitably qualified.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	5	14.3
2	13	37.1
3	9	25.7
4	6	17.1
5	2	5.7
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.12 Personnel to implement guidelines is suitably qualified**

The findings on personnel to implement guidelines being suitably qualified indicate that 5 out of 35 (14%) strongly agreed, 13 out of 35 (37%) agreed, 7 out of 35 (26%) not sure, 6 out of 35 (17%) disagreed, 2 out of 35 (6%) strongly disagreed. The overall results indicate that 18 out of 35 (51%) the state university's personnel to implement guidelines are suitably qualified.

#### 4.5 Challenges encountered in the funding system

State the challenges encountered in the funding system – inadequate funds

	Frequency	Percent
Valid 1	1	2.9
2	22	62.9
3	6	17.1
4	4	11.4
5	2	5.7
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.13 Challenges encountered in the funding system – inadequate funds**

Findings on challenges encountered in the funding system due inadequate funds indicate that 1 out of 35 (3%) strongly agreed, 22 out of 35 (63%) agreed, 6 out of 35 (17%) not sure, 4 out of 35 (11%) disagreed, 2 out of 35 (6%) strongly disagreed. The overall results indicate that 23 out of 35 (66%) there are challenges encountered in the funding system of state university as a result of inadequate funds.

State the challenges encountered in the funding system – delay in release of funds

	Frequency	Percent
Valid 1	0	0.0
2	14	40.0
3	10	28.6
4	6	17.1
5	5	14.3
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.14 Challenges encountered in the funding system – delay in release of funds**

Findings on challenges encountered in the funding system due delay in release of funds indicate that 0 out of 35 (0%) strongly agreed, 14 out of 35 (40%) agreed, 10 out of 35 (29%) not sure, 6 out of 35 (17%) disagreed, 5 out of 35 (14%) strongly disagreed. The overall results indicate that 21 out of 35 (60%) there are no challenges encountered in the funding system of state university as a result of delay in release of funds.

State the challenges encountered in the funding system – failure to pay fees by students

	Frequency	Percent
Valid 1	5	14.3
2	27	77.1
3	1	2.9
4	2	5.7
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.15 Challenges encountered in the funding system – failure to pay fees by students**

Findings on challenges encountered in the funding system due to failure to pay fees by students indicate that 5 out of 35 (14%) strongly agreed, 27 out of 35 (77%) agreed, 1 out of 35 (3%) not sure, 2 out of 35 (6%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 32 out of 35 (77%) there are challenges encountered in the funding system of state university as a result of failure to pay fees by students.

#### 4.6 Possible solutions to challenges faced

Challenges have possible solutions– cost initiated programmes

	Frequency	Percent
Valid 1	4	11.4
2	20	57.1
3	0	0.0
4	9	25.7
5	2	5.7
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.16 Possible solutions to challenges faced– cost initiated programmes**

Findings on possible solution to challenges faced– cost initiated programmes indicate that 4 out of 35 (11%) strongly agreed, 20 out of 35 (57%) agreed, 0 out of 35 (0%) not sure, 9 out of 35 (26%) disagreed, 2 out of 35 (6%) strongly disagreed. The overall results indicate that 24 out of 35 the possible solution to challenges faced is cost initiated programmes.

Challenges have possible solutions– early release of funds

	<b>Frequency</b>	<b>Percent</b>
Valid 1	0	0.0
2	19	54.3
3	10	28.6
4	6	17.1
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.17 Possible solutions to challenges faced– early release of funds**

Findings on possible solution to challenges faced– early release of funds indicate that 0 out of 35 (0%) strongly agreed, 19 out of 35 (54%) agreed, 10 out of 35 (29%) not sure, 6 out of 35 (17%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 19 out of 35 (54%) the possible solution to challenges faced is early release of funds.

Challenges have possible solutions– students paying fees in time

	<b>Frequency</b>	<b>Percent</b>
Valid 1	10	28.6
2	18	51.4
3	7	20.0
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.18 Possible solutions to challenges faced– students paying fees in time**

Findings on possible solution to challenges faced– students paying fees in time indicate that 10 out of 35 (29%) strongly agreed, 18 out of 35 (51%) agreed, 7 out of 35 (20%) not sure, 0 out of 35 (0%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 28 out of 35 (80%) the possible solution to challenges faced is for students to pay fees in time.

#### 4.7 Funding systems in universities

The funding systems in university include state appropriation (vote allocation).

	Frequency	Percent
Valid 1	14	40.0
2	21	60.0
3	0	0.0
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.19 Funding systems in universities – state appropriation**

Findings on funding systems in universities – state appropriation indicate that 14 out of 35 (40%) strongly agreed, 21 out of 35 (60%) agreed, 0 out of 35 (0%) not sure, 0 out of 35 (0%) disagreed, 0 out of 35 (0%) strongly disagreed. The results show that 35 out of 35 (100%) the funding systems in universities is state appropriation.

The funding systems in university include students' fees

	Frequency	Percent
Valid 1	10	28.6
2	25	71.4
3	0	0.0
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.20 Funding systems in universities – student fees**

Findings on funding systems in universities – state appropriation indicate that 10 out of 35 (29%) strongly agreed, 25 out of 35 (71%) agreed, 0 out of 35 (0%) not sure, 0 out of 35 (0%) disagreed, 0 out of 35 (0%) strongly disagreed. The results show that 35 out of 35 (100%) the funding systems in universities are charging of student fees.

The funding systems in university include research co

	<b>Frequency</b>	<b>Percent</b>
Valid 1	0	0.0
2	15	42.9
3	10	28.6
4	5	14.3
5	5	14.3
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.21 Funding systems in universities – research contracts**

Findings on funding systems in universities – research contracts indicate that 14 out of 35 (40%) strongly agreed, 21 out of 35 (60%) agreed, 0 out of 35 (0%) not sure, 0 out of 35 (0%) disagreed, 0 out of 35 (0%) strongly disagreed. The results show that 20 out of 35 (57%) the funding systems in universities are not research contracts.

The funding systems in university include funding formula for vote allocation.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	6	17.1
2	20	57.1
3	4	11.4
4	5	14.3
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.22 Funding systems in universities – funding formula for vote allocation**

Findings on funding systems in universities – funding formula for vote allocation indicate that 6 out of 35 (17%) strongly agreed, 20 out of 35 (57%) agreed, 4 out of 35 (11%) not sure, 5 out of 35 (14%) disagreed, 0 out of 35 (0%) strongly disagreed. The results show that 26 out of 35 (74%) the funding systems in universities which is best practice is funding formula for vote allocation.



#### 4.8 Control and review funding system

Some internal controls are in place over funding including segregation of duties.

	Frequency	Percent
Valid 1	15	42.9
2	15	42.9
3	0	0.0
4	5	14.3
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.23 Internal controls in place– segregation of duties**

Findings on internal controls in place– segregation of duties indicate that 15 out of 35 (43%) strongly agreed, 15 out of 35 (43%) agreed, 0 out of 35 (0%) not sure, 5 out of 35 (14%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 30 out of 35 (86%) internal controls in place are segregation of duties.

Some internal controls are in place over funding including supervision.

	Frequency	Percent
Valid 1	9	25.7
2	21	60.0
3	3	8.6
4	2	5.7
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.24 Internal controls in place– supervision**

Findings on internal controls in place– supervision indicate that 9 out of 35 (26%) strongly agreed, 21 out of 35 (60%) agreed, 0 out of 35 (0%) not sure, 5 out of 35 (14%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 30 out of 35 internal controls in place is supervision.

Some internal controls are in place over funding including budgetary control practices.

	<b>Frequency</b>	<b>Percent</b>
Valid 1	12	34.3
2	18	51.4
3	0	0.0
4	1	2.9
5	4	11.4
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.25 Internal controls in place– budgetary control practices**

Findings on internal controls in place– budgetary control practices indicate that 12 out of 35 (34%) strongly agreed, 18 out of 35 (51%) agreed, 0 out of 35 (0%) not sure, 1 out of 35 (3%) disagreed, 4 out of 35 (11%) strongly disagreed. The overall results indicate that 30 out of 35 (86%) internal controls in place are budgetary control practices.

Some internal controls are in place over funding including Procurement Committee

	<b>Frequency</b>	<b>Percent</b>
Valid 1	5	14.3
2	25	71.4
3	5	14.3
4	0	0.0
5	0	0.0
<b>Total</b>	<b>35</b>	<b>100.0</b>

**Table 4.26 Internal controls in place– Procurement Committee**

Findings on internal controls in place– Procurement Committee in place indicate that 5 out of 35 (14%) strongly agreed, 25 out of 35 (71%) agreed, 5 out of 35 (14%) not sure, 0 out of 35 (0%) disagreed, 0 out of 35 (0%) strongly disagreed. The overall results indicate that 30 out of 35 (86%) internal controls in place is the existence of Procurement Committee.

## **4.9 Summary**

This chapter looked at the presentation of findings using statistical method that is graphs and tables, analysis of the results. The text chapter looks at the summaries, conclusions and recommendations.

## **CHAPTER 5**

### **FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter looks at the chapter summary, major findings, conclusion and the recommendations that are going to be made about funding systems in state universities.

#### **5.1 Chapter Summaries**

The Chapter 1 looked at the background, environment analysis, statement of problem, research questions, research objectives, justification of study, limitations, assumptions and delimitations.

The Chapter 2 covered the related literature on funding system, funding definitions, implementation of funding system, funding process, sources of funding, categories of funding for state universities, tuition fees, research contracts, control of funding system, future funding of higher education, private public partnership, differentiated government funding model, cost sharing, differentiated and privatization, and control measures of funding system.

The Chapter 3 covered at methodology, research philosophy, design, descriptive survey, sample design, population, sampling procedure, research instruments and data collection procedures.

The Chapter 4 looked on presentation of findings using statistical method such as graphs and tables, analysis of the results and data analysis.

#### **5.2 Major Findings**

##### **Funding system for state universities**

The overall results indicate the following

- The state universities had funding system for revenue;
- The state universities had funding system for capital expenditure;
- The state university's funding system is formulated by the University Council;

- The state university's funding system is documented; and
- The state university's funding system is not communicated.

### **Existence of funding systems implementation**

The overall results indicate the following:

- The state university's funding system implementation guidelines are not in place;
- The state university's funding system implementation guidelines are understandable to accounting function; and
- The state university's funding system implementation guidelines are not comprehensive.

### **Personnel capacity in implementing funding system**

The overall results indicate the following:

- The state university's personnel to implement guidelines are not adequate; and
- The state university's personnel to implement guidelines are suitably qualified.

### **Challenges in the funding system**

The overall results indicate the following:

- There are challenges encountered in the funding system of state university as a result of inadequate funds;
- There are no challenges encountered in the funding system of state university as a result of delay in release of funds; and
- The failure to pay fees by students is one of challenges encountered in the funding system of state university.

Possible solutions to challenges faced are as follows:

- The possible solution to challenges faced is cost initiated programmes;
- Early release of funds is the possible solution to challenges faced; and
- The possible solution to challenges faced is for students to pay fees in time.

### **Controls over the funding system**

The overall results indicate the following:

- Internal controls in place are segregation of duties;
- Internal controls in place is supervision;
- Internal controls in place are budgetary control practices; and
- An internal control in place is the existence of Procurement Committee.

### **Best practice in university funding**

The results show the following:

- The funding systems in universities is state appropriation;
- Charging of student fees is the funding systems in universities;
- Research contracts are not the funding systems in universities; and
- The funding system in universities which is best practice is funding formula for vote allocation.

## **5.3 Conclusion**

The research was a success since the respondents' results show that there was funding system in state universities. There was general agreement in implementation guidelines not in place, sources of funding, control measures and the best practices in university funding.

## **5.4 Recommendations**

The study recommends the following:

- i. The state universities should improve the communication on the funding systems used in their institutions.
- ii. There should be funding system implementation guidelines in place, understandable, communicated and comprehensive in state universities.

- iii. Adequate personnel should be in place to implement funding system guidelines in state universities.
- iv. The state universities should explore the use of public private partnerships in setting up the infrastructure to ease pressure on the government.
- v. There is need to improve on the tender procedures when acquiring services for operations and capital projects in state universities.
- vi. The state universities in Zimbabwe should lobby government to adopt other funding systems used in South Africa such as funding formula for vote allocation.

### **5.5 Areas for further research**

There is need to study further the funding formula for vote allocation as practiced in other countries besides South Africa to come up with a more scientific, objective and goal-oriented way of allocate public resources to state universities.

### **5.6 Summary**

This chapter looked at summary, major findings, conclusion, areas for further research and recommendations. This also ends the research study.

## **Appendix 1**

### **Cover Letter**

Zimbabwe Council for Higher Education  
21<sup>st</sup> J. M. Nkomo Road  
Hatfield  
Harare

9 October 2014

The Registrar  
University of Zimbabwe  
P. O. Box MP 167  
Mount Pleasant  
Harare

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**RE: AUTHORITY TO CONDUCT RESEARCH: SAMSON NYAWO**

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I am kindly requesting for authority to conduct research on the funding of state universities in Zimbabwe.

I am a student at Midlands State University doing my final year towards B Comm Acc Hons and working for the Zimbabwe Council for Higher Education as an Accounting Officer in the Finance Department.

Information availed to me would be held in confidence and would be used for academic purposes only.

Your cooperation in this matter will be highly appreciated.

*S. Nyawo*  
**Student :Reg. No. R0435253**



## Appendix 2

### QUESTIONNAIRE

This questionnaire seeks to find out the views of people concerning state universities funding by government.

Please note that this is for academic purposes only. Your name is not required on this questionnaire. All the information provided will be treated in strict confidentiality.

**Tick in the appropriate box.**

1. State your organization: UZ  MSU  ZOU  GZU  HIT

2. State your designation in the organization: Pro - Vice Chancellor  Registrar   
 Bursar  Librarian  Dean  Deputy Registrar   
 Deputy Bursar  Chairperson  other

3. State your level of management. top management  middle management   
 low level management

4. Level of relevant experience: 0 – 2 years  2 – 4 years  4 – 6 years   
 6 – 8 years  8 – 10 year  more than 10 years

5. Highest level of qualification attained: Diploma  Undergraduate  Master's degree   
 Doctorate  Associate Professor  Professor

6. State University has funding system for

	strongly agree	agree	not sure	disagree	strongly disagree
(i) revenue expenditure					
(ii) capital expenditure					

7. Funding system is formulated by

	strongly agree	agree	not sure	disagree	strongly disagree
(i) Permanent Secretary for Higher and Tertiary Education					
(ii) Ministry of Finance					
(iii) Minister of Higher and Tertiary Education					
(iv) University Council					
(v) University Committee					

8. Funding system is documented:

Strongly agree     agree     not sure     disagree     strongly disagree

9. Funding system is communicated to accounting function:

Strongly agree     agree     not sure     disagree     strongly disagree

10. Funding system implementation guidelines are in place:

Strongly agree     agree     not sure     disagree     strongly disagree

11. Implementation guidelines are understandable to accounting function:

Strongly agree     agree     not sure     disagree     strongly disagree

12. Implementation guidelines are comprehensive:

Strongly agree     agree     not sure     disagree     strongly disagree

13. Personnel to implement guidelines is adequate (in numbers):

Strongly agree     agree     not sure     disagree     strongly disagree

14. Personnel to implement guidelines is suitably qualified:

Strongly agree       agree       not sure       disagree       strongly disagree

15. Personnel to implement guidelines is inducted in new practice:

Strongly agree       agree       not sure       disagree       strongly disagree

16. State the challenges encountered in the funding system:

	strongly agree	agree	not sure	disagree	strongly disagree
(i) inadequate funds					
(ii) delay in release of funds					
(iii) failure to pay fees by students					
(iv) poor remuneration of staff					
(v) brain drain of staff					

(vi) Any other (specify) .....

.....

.....

.....

.....

17. Challenges have possible solutions:

	strongly agree	agree	not sure	disagree	strongly disagree
(i) cost initiated programmes					
(ii) early release of funds					
(iii) students paying fees in time					
(iv) good remuneration of staff					

(v) Any other (specify) .....

.....

.....

.....

18. The following internal controls are in place over funding:

	strongly agree	agree	not sure	disagree	strongly disagree
(i) segregation of duties					
(ii) supervision					
(iii) budgetary control practices					
(iv) Procurement Committee in place					

(v) Any other (specify) .....

.....

.....

.....

19. Internal controls are understandable to accounting function:

Strongly agree       agree       not sure       disagree       strongly disagree

20. Internal controls are documented:

Strongly agree       agree       not sure       disagree       strongly disagree

21. The funding systems in university is including the following.

	strongly agree	agree	not sure	disagree	strongly disagree
(i) State appropriation (vote allocation)					
(ii) Student fees					
(iii) Research contracts					
(iv) Private public partnership					
(v) Cost sharing with parents/ guardian					
(vi) Funding formula for vote allocation					

State if any other university funding approaches.....

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*Thank you very much for your response*

### **Appendix 3**

#### **INTERVIEW QUESTIONS**

This interview questions seek to find out the views of people concerning state universities funding by government.

Please note that this is for academic purposes only. Your name is not required on this questionnaire. All the information provided will be treated in strict confidentiality.

1. How do you fund your university operations?
  - i) Capital
  - ii) Revenue
2. What are other funding systems in place? Explain them.
3. What are challenges faced and possible solutions?
4. What challenges faced by students in paying fees and how are overcome?
5. How is the budgeting process carried out at the university?
6. What is the way forward in order to bridge the deficit in your funding?
7. What are controls in the funding system and what extend they can be improved?
8. Brief explanation from bidding up to the use of funds.

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