KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF ECONOMICS AND INDUSTRIAL MANAGEMENT

EVALUATION OF THE BUDGETING SYSTEM OF UNIVERSITY FOR DEVELOPMENT STUDIES

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ECONOMICS AND INDUSTRIAL MANAGEMENT, COLLEGE OF ARTS AND SOCIAL SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MBA DEGREE

BY

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DECLARATION

I, Alhassan Iddrisu, do hereby declare that except for references cited, which have been duly acknowledged, this work, '**Evaluation of the Budgeting System of University for Development Studies'** is the result of my own research under the supervision of Dr. J. Ohene Manu. It has never been presented anywhere either in part, or in whole for the award of any degree.

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DEDICATION

Dedicated to my family

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Despite the assistance of so many, I alone am responsible for any remaining errors and omissions in this thesis.

TABLE OF CONTENT

CHAPTER FIVE: CONCLUSION

LIST OF TABLES

LIST IF FIGURES

LIST OF BOXES

ABSTRACT

The role of Budgets cannot be over emphasized in the implementation of organizational policies and strategic plans. This study, which covered 1994 to 2003, evaluated the budgeting system of the University for Development Studies (UDS) with the view to identifying weaknesses inherent in the system. It also reviewed the methods of budgeting used to establish whether that can influence government decision to release funds to the university. Further the study identified variances and their causes in the university's budgets. Data was gathered mainly from the university's annual budget estimates and audited accounts. This was supplemented with information from interviews, focus group and informal discussions. The mean budget estimates and actual releases, the student t-test and ANOVA were used to seek answers to research questions. The significant differences among research variables were tested at 0.05 significant level. It was found that the budgeting system used during the study period was weak relative the standard definition. The study also revealed that government is not influenced by the technique of budgeting used. Instead, student population, among others, are factors considered in the allocation of funds. The annual budget estimates were found to be erratic and inconsistent, but government subvention had steadily increased over the study period. There is no budget committee and budget manual. Also, the budget section is weak in terms of staffing and logistics. Based on these findings, it is recommended among other things that a budget committee be formed and training arranged for budget staff and budget holders. The University can also lobby Parliament for a special fund. Research is also needed in the University's information management.

CHAPTER ONE

INTRODUCTION

1.1. GENERAL BACKGROUND ISSUES

In the past the main source of funding for public universities in Ghana was Government subvention. Financial planning was therefore reduced to simple incremental budgeting both for recurrent and capital expenditures. Today, financial planning in the public universities in Ghana is increasingly becoming complex. This is due to the fact that government subvented universities in Ghana are constantly under pressure to generate income internally to support their operations. Further, to meet the burgeoning demand for university education, some of the public universities such University of cape Coast (UCC) and University of Education Winneba (UEW) have introduced sandwich programmes and revised their academic programmes to make them industry relevant. Kwame Nkrumah University of science and Technology (KNUST) has open out its academic programmes to include 'non-traditional' courses including Law, Music, Business and Sports to meet the ever-changing needs and aspirations of the wider society. Nearly all the universities have made strategic moves to braise themselves to meet the challenges posed by Information and Communication Technology (ICT) within the global environment. Government development programmes have consistently been directed towards poverty alleviation (GPRS, 2002). Public universities are therefore urged to move towards practical oriented programmes.

These challenges are more pronounced in the University for Development Studies (UDS). The law (PNDC Law 279) which established the university requires it to blaze a new trail in higher education in Ghana by effectively combining academic studies with field practical training. The University is to produce men and women who are practically oriented without sacrificing academic excellence (Kaburise, 2002). This mandate is to be implemented via a multi-campus structure.

These pressures have forced universities especially, UDS, to reengineer their financial administration to take care of these developments. The import of this study is the financial planning and control implications of these challenges.

In the structure of any public university in Ghana and elsewhere is a finance department. The finance department is principally concerned with the receipt, custody and disbursement of funds. The department must keep proper records of all transactions and produces financial reports, which must give a true and fair view of the state of affairs of the organization. According to the Financial Administration Regulation (FAR), 1979, L. I., 1234, failure of this responsibility is deemed a breach of the law and subject to discipline.

In this regard, the responsibilities of the finance section (Finance Office) of the (UDS) are:

- Keeping proper books of account and preparing periodic expenditure returns for National Council for Tertiary Education (NCTE);
- Management of account payables and receivables;

- Management of Government subvention, Internally Generated funds (IGF), and donor funds;
- Management of Personnel emoluments (payroll) and other issues relating to staff remuneration;
- Procurement and stock control;
- Preparation and consolidating of financial reports to support management decision-making;
- Coordinating the development of Budgets and exercise of budgetary control;
- Monitoring financial activities of the Central Administration, Nyankpala, Navrongo and Wa Campuses.
- Advising Management on all financial matters relating to the University.

The financial administration (i.e. the discharge of the above responsibilities) of a multi-campus University like UDS is a daunting task, especially, where finances are perpetually inadequate. There is therefore the need to equip the Finance Office to leave up to these challenges.

A study was conducted by KPMG (2003), an international Accounting Firm that provides accounting and business consultancy services, in 2003 on the Financial Administrative Function of the UDS. The study identified some nagging problems associated with the University's financial administration, especially the budgeting system. Some of these problems are highlighted below.

- The University is located in the Northern part of Ghana, where poverty is more pronounced (GPRS, 2002). This makes it difficult to attract and retain the right calibre of personnel.

- There is a location diseconomy. Financial activities of a multi-campus University such as UDS are expensive to coordinate. For instance Deans of Faculties, Heads of Departments, and Faculty Accountants shuttle to and from Central administration for meetings and imprest retirement. This involves cost especially on T&T, Per Diem and over-night allowances. This problem is compounded by the centralized financial system of the University.

- Budgets prepared to support subvention releases from the Government are not compared on periodic basis with actual expenditure to highlight any over/under expenditure. Besides, the Government does not fund certain items of cost in the University's budget. Thus excesses in such expenditure would not be promptly highlighted for the necessary corrective action to be taken.

- The budgeting system is not integrated with the financial reporting system; hence variance report cannot be produced on timely basis. The Finance Office under the circumstance is not able to produce financial report to assist management to effectively plan, execute, evaluate and control the activities of the University. This phenomenon is attributable to the lack of skilled personnel and equipment to operate an effective budgetary system (see Review of Financial Administrative Function of University for Development Studies, 2003, KPMG, page 16)

- Funds allocation by Government is not based on the University's budget (see Ibid, page 5). For instance provisions for administrative costs and utility services do not reflect the expenditure levels of the University. The university could thus be saddled with large unfavourable budget variances.

The problems identified by the KPMG's study confirm my perception about the UDS budgeting system. Internal stakeholders, such as

Deans, Head of Departments, Heads of Sections, and Lectures etc are not involved in the preparation of the budget. There was also no coordination between the Works and physical Department (WPD), which was responsible for the capital expenditure budget and the Finance Office, which also prepares the recurrent budget. As a staff working on the university's budgets, I did not understand the budget manuals, sent by the National Council for Tertiary Education (NCTE). Further the time period for the preparation of the budget was short such that comprehensive estimates could not be made. These problems were compounded by inadequacy of the information required to produce the budgets.

1.2. STATEMENT OF THE RESEARCH PROBLEM

The importance of budget and budgetary control in any organization cannot be over emphasized. It details out plans of organizations and express these plans quantitatively and in monetary terms. Budgets specify how resources will be acquired and used during a given period of time in order to achieve the policy objectives of the organization. Article 179 of the Constitution of the Republic of Ghana requires the preparation of annual budget estimates for the country. In Ghana and elsewhere budgets are prerequisite for the release of funds to subvented organizations. Public universities in Ghana are expected to use budgets not only to achieve the release of funds from Government, but also to plan in terms of student intake, staff recruitment, and other academic activities. It should also be used to communicate responsibilities to the various faculties, and further coordinate the activities of these cost centres to achieve the desired objective.

Budgets are expected to be a source of authority to spend and to commit Government funds in the procurement of resources such as equipment, vehicles, furniture and construction (see FAR, 1979, Part II).

The financial activities of "Responsibility Centres" such as Faculties, Departments and Units are monitored through budgetary control. For instance, the performance of Deans and Heads of Departments (HODs) can be evaluated through the use of budgets.

The contentious issue however is whether UDS takes full advantage of these immense benefits offered by budgets. I have prepared the university's budget from 1996 to 2000 and my candid assessment of the budget is that it was not all inclusively prepared because there was no budget committee in place. I was asked to study the budget manual from the NCTE (which was little understood, because of the short time notice) and prepare a draft for the consideration of the Finance Officer. Internal stakeholders such as Deans and HODs were not involved in the preparation. The report by KPMG (2003) on UDS' financial administration confirms these problems and triggers certain pertinent researchable questions regarding UDS' budgeting system.

The four main research questions, which form the bedrock of this study, are as follows.

1. What is the budgeting system in the UDS?
2. What method of budgeting does the UDS use?
3. Does the method of budgeting influence government decision to release funds to the university?
4. Are there budget variances in the UDS' budgeting system? If there are what are the causes of the variances?

1.3. OBJECTIVE AND RATIONALE OF THE STUDY

1.3.1. General Objectives

To evaluate the budgeting system of University for Development Studies (UDS)

1.3.2. Specific Objectives

1. To describe the method(s) of budgeting used by the UDS since its inception.
2. To review the budgeting system of UDS with the aim of identifying its weaknesses.
3. To identify reasons for and calculate budget variances in the UDS.

consultation. In fact user involvement is quite minimal. This apparently creates gaps in the University's budget. The study aims at providing insights into the gaps and weaknesses inherent in the University's budgeting system. Based on the recommendations of the study, a comprehensive, realistic and convincing budget, produced on timely bases will be achieved.

1.4. METHODOLOGY AND SCOPE

The study is limited to the budgeting system of the UDS for the period 1994 to 2003. Thus budget estimates and financial statements from 1994 to 2003 of the University are the reference point for the evaluation. The study area is UDS for a number of reasons. First, as a staff, whose schedule was previously on the budget, I have unfettered access to information. The relevance of the study period is in the fact that the UDS commenced operations in 1993. An evaluation of its ten years of existence will thus provide a sound bases for research judgment.

The descriptive approach was used in this study. Data were gathered from primary and secondary sources. Primary data was collected via interviews, meetings, informal discussions and focus group discussions. Annual budget estimates for income, recurrent and capital expenditures have been collected. Actual expenditures and income have also been collected from the university's annual Financial Statements. Information on the budget procedure was also collected.

Secondary data were gathered through literature review. Relevant literature (books, journals, seminar papers, and other accessible publications) were used. The Internet was also be used extensively for information.

Sampling and Data Analysis

In all nine staff from two different departments (Finance Office and Works and Physical Department) have been interviewed. Those interviewed from the Finance Office are the Finance Officer (FO) and five sectional heads. The FO is responsible for the financial administration of the University. Consequently, his input to the budget is significant and can thus provide vital information for the study. The Sectional Heads of Budget, Cash Office, Stores, Payroll and Final Accounts are the five others interviewed in the Finance Office. This group prepares and implements the UDS recurrent budget.

Similarly, the Development Officer, the architect and the clerk of works were interviewed from the Development Office. The Development Office is responsible for physical development in the

University. The department prepares the University's capital expenditure budget; consequently, its inputs cannot be ignored.

Deans, and their Heads of Departments (HODs) and a sample of lecturers were targeted. However, preliminary investigations indicate that currently, this group does not make any input to the budget preparation and implementation. They were therefore dropped.

Simple calculations were performed on data gathered. Variance analyses have been conducted. Graphs and tables have been used to present data. Statistical tools such as percentages, the t-test and Analyses of Variance (ANOA) have been used to establish and explain trends.

Hypotheses Testing

Between 1994 and 2003, three different budgeting methods have been used: Incremental Budgeting (IB), from 1994 to 1997; Programme Linked Budgeting (PLB), from 1998 to 1999; and Medium Term Expenditure Framework (MTEF) from 2000 to 2003 and beyond. The study seeks to establish the relationship between actual subvention released to the university and the method of budgeting used. The aim is to identify whether the method of budgeting used can influence government decision regarding the release of funds to the university. This is conducted using a number of hypotheses as follows:

1. **Hypotheses on Government Subvention for Recurrent Expenditure**

   a. Incremental Budgeting (IB) verses Programme Linked Budgeting (PLB)

   H_0: There is no significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting (IB) and PLB

   H_1: There is a significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting(IB) and PLB

   b. Incremental Budgeting (IB) verses Medium Term Expenditure Framework (MTEF)

   H_0: There is no significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting (IB) and MTEF

   H_1: There is a significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting(IB) and MTEF

c. Programme Linked Budgeting (PLB) verses Medium Term Expenditure Framework (MTEF)

H_0: There is no significant difference between the mean (average) of subvention received for recurrent expenditure under PLB and MTEF

H_1: There is a significant difference between the mean (average) of subvention received for recurrent expenditure under PLB and MTEF

2. Hypotheses on Government Allocation for Capital Expenditure

a. Incremental Budgeting (IB) verses Programme Linked Budgeting (PLB)

H_0: There is no significant difference between the mean (average) of government allocation for capital expenditure under IB and PLB

H_1: There is a significant difference between the mean (average) of government allocation for capital expenditure under IB and PLB

b. Incremental Budgeting (IB) verses Medium Term Expenditure Framework (MTEF)

H_0: There is no significant difference between the mean (average) of government allocation for capital expenditure under IB and MTEF

H_1: There is a significant difference between the mean (average) of government allocation for capital expenditure under IB and MTEF

c. Programme Linked Budgeting (PLB) verses Medium Term Expenditure Framework (MTEF)

H_0: There is no significant difference between the mean (average) of government allocation for capital expenditure under PLB and MTEF

H_1: There is a significant difference between the mean (average) of government allocation for capital expenditure under PLB and MTEF

3. **Testing Hypotheses on the Difference between the Three Budgeting Methods Using ANOVA**

a. Hypotheses Testing (ANOVA) for Government Subvention on Recurrent Expenditure

H_0 There is no significant difference between the mean averages of releases for recurrent expenditure for all the three budgetary methods.

H_1 There is a significant difference between the mean averages of releases for recurrent expenditure for all the three budgetary methods.

b. Hypotheses Testing (ANOVA) for Government Subvention on Capital Expenditure

H_0 There is no significant difference between the mean averages of releases for capital expenditure for all the three budgetary methods.

H_1 There is a significant difference between the mean averages of releases for capital expenditure for all the three budgetary methods.

1.5. ORGANIZATION OF THE STUDY

The study is organized into five chapters. Chapter one is introduction to the study. It comprises of the general background issues and objective of the study. It also covers methodology and Scope of the study, sampling and data analysis together with hypotheses testing.

Literature Review is contained in chapter two. The chapter comprise of definition of terms and concepts. It also presents discussions of the types and methods of budgeting. A description of the budgeting process in relation to public and corporate budgeting is also presented. Further a brief discussion of public and corporate budgeting in the USA and public budgeting in Porto Alegre - South-Brazil is presented. Finally the chapter presents the benefits of budgeting and budget variance.

Chapter three is a profile of the University for Development Studies. The annals of a university for the north and the legal and institutional framework of UDS are discussed. Other issues covered include Organogram and the physical structure of the UDS, enrolment and human resource capacity and the budgeting system of the UDS.

Chapter four comprise of discussions and analysis of results. The methods of budgeting used by the UDS since the university's inception are analyzed. Results from each method are presented in Tables and charts. Finally the hypotheses of the study are tested using the student t-test and ANOVA.

The summary of major findings, recommendations and limitations of the study are presented in chapter Five. Finally the chapter presents the concluding note.

CHAPTER TWO

LITERATURE REVIEW

2.1 DEFINITION OF TERMS AND CONCEPTS

The economic reality faced by organizations is that their resources on one hand are limited whereas their needs on other hand are unlimited. This calls for a planned allocation of scarce resources and their efficient and effective utilization to achieve value for money. In this regard public and private organizations, including universities, require a management tools through which limited resources can be allocated and used most economically. This can be achieved through the use of budgets. This chapter deals with literature review. It discusses the theoretical framework of budgeting, the process of budgeting, in both the public and corporate sectors, and highlights of the types of budgets. The benefits of budgeting and reasons for budget variance are also discussed.

Budget

Philip (2001) defines budget as "a plan express in money. It is prepared and approved prior to a budget (defined) period and may show (planned) income (to be generated), expenditure (to be incurred) and the capital to be employed (to attain a given objective). It may be drawn up showing incremental effects on former budgeted or actual figures, or be compiled by zero-based budgeting technique". (Budgets – a functional approach, Student Accountant, June/July ed., 2001, page 34).

Lucey (1991) stated that a budget is quantitative expression of a plan of action prepared in advance of the period to which it relates. He further explained that budgets may be prepared for the business as a whole, for departments, for function such as sales and production, or for financial and resource items such as cash, capital expenditure, manpower, purchases etc. He added that the process of preparing and agreeing budgets is a means of translating the overall objectives of the organization into detailed, feasible plan of action.

In Lucey (1996), budgeting is explained as a short-term tactical planning tool through which detailed short-term (usually 1 year) plans for functions, activities and departments of an organisation are prepared. It converts long-term corporate plans into action.

Anthony, Dearden and Bedford (1989), also defines budgeting as a management plan, with the assumption that positive steps will be taken by the budgetee to make actual events correspond to plan.

According to Adom-Frimpong (2002), a budget is a prospectus referring to expected future revenues, expenditure activities and purpose or goals. He further explains that a budget can be regarded as an accounting document because it seeks to allocate resources between competing activities or agencies. Adom-Frimpong is of the view that as an economic document budgets lay down the direction of an economy.... to achieve stated objectives. Finally, Adom-Frimpong is of the view that a budget is a social document because it contains promises by Governments to carry out activities that will lead to the overall social well being in the society.

Earl, Leon and Susan (1999) explained the legal view of a budget. They defined budget as a plan of financial operations embodying an estimate of proposed expenditures for a given period of time and the proposed means of financing them. Thus budgets are financial expressions of plans prepared by managers for operating an organization during a time period and for changing its physical facilities and its capital structure. In a more general sense, according to them, budgets may be regarded as devices to aid management to operate an organization more effectively.

In the context of this study, a budget refers to the university's annual estimates showing planned income to be generated, recurrent expenditure to be incurred and the capital (expenditure) to be employed to attain a given objective during the ensuing period.

Budgeting system

According to Hilton, Maher and Selto (2000), budgeting system comprises the procedures used to develop a budget. In the context of this paper, budgeting system comprise of the following activities.

i. Planning. The act of translating the university's long-term objectives into actionable short-term activities and further quantifying these activities in monetary terms require careful planning.

ii. Facilitating and coordinating

   Activities, expenditure and revenue items, which constitute the budget, are generated by several budget centers which are geographically dispersed. This calls for effective coordination if a good budget is to be prepared.

iii. Allocating resources

   Government budgetary allocation to the university is always inadequate relative to its resource requirement. The limited funds must therefore be allocated among competing uses.

iv. Monitoring financial and operational performance

This involves capturing and analyzing actual data to discover the extent of conformity to plans.

v. Evaluating performance

Actual results must be compared with budgeted results to assist the university administration evaluate the performance of budget centre and budget holders.

Budget Centre

A budget centre is a clearly defined part of an organisation for the purposes of operating a budgetary control system (Foulkslynch, 2003). In this context, a budget centre refers to a faculty, department, unit or section of the university to which cost or revenue can be attributed. It is also referred in the context as responsibility centre, or a cost centre.

Budget Officer and Budget Committee

In Lucey (1996), a budget Officer specifies the process by which budget data will be gathered, collects the information, and prepares the master budget. In small-scale organisations the budget Officer is usually the owner. In contrast larger organisations appoints the budget Officer. This definition is adopted in this study.

According to Garrison and Noreen (1997) a budget committee is a group of key management persons who are responsible for overall policy matters relating to the budget programme and for coordinating the preparation of the budget itself. This is a working definition in the context of this paper.

Budget slack

Lucey (1996) defined a budget slack as the difference between the revenue or cost projections that a person provides and a realistic estimate of the revenue or cost. The study adapts this definition.

Budget Manual

Drury (1996) explains that a budget manual describes the objectives and procedures involved in the budgeting process and provides a useful reference source for managers responsible for budget preparation. According to him the manual may include a timetable specifying the order in which the budget should be prepared and the dates when they should be presented to the budget committee. The study agrees with Drury but add that the document indicates who is responsible for providing various types of budget information, when the information is required, and what form the information is to take.

2.2. THE TYPES AND METHODS OF BUDGETING

For purposes of this study, public budget refers to Government annual budget. Literature on public sector budgeting was therefore reviewed. Corporate budget on the other hand refers to budgets prepared by business organizations (profit-making and not-for- profit making). The two have similar characteristics in terms of procedure and benefits offered whilst at the same time differing in content.

For instance, the focus of private budget is profit. Resource allocation is thus based on profit making potential of competing activities. Under public sector budgeting resources are allocated to programmes (agriculture, defends, education, health, research, roads, etc) which are, though competing, difficult to quantify. Certainly, quantifying and comparing the net value of getting a street child rehabilitated and a life saved through cancer research is a difficult task.

Further, politicians largely influence decision making on public budget, though its management is the responsibility of professionals at the various Ministries, Departments and Agencies (MDAs). For instance, the Ministry Of Finance and Economic Planning (MOFEP), Cabinet and Parliament exert a great deal of influence on the annual budget. For example public expenditure must be authorized by Parliament. In contrast, corporate budgeting is the sole responsibility of management.

Another important distinction is that due to its focus on national interest public budgets are subjected to public debate and in some instances political bargaining. Budgetary decisions could thus take a longer time. Corporate budgets on the other hand are organization specific thus making budgetary decisions faster.

The distinction is necessary because the budgets of all public universities are funded via the National budget.

In corporate situation, there are several budgets, such sales, production, purchases, labour cost, and overheads. These are broadly classified into revenue and expenditure budgets. In addition, cash budgets are commonly prepared. In the public sector, budgets are similarly classified. Typically, tertiary institutions in Ghana, like any other MDA are required to prepare the following budgets:

i. Budget for Internally Generated Funds (IGF), the equivalent of revenue budget in corporations

ii. Personnel Emoluments (PE) budget, the equivalent of labor cost budget in corporations

iii. Administrative expenditure budget, the equivalent of non-production overhead cost budget in corporations

iv. Service expenditure budget, the equivalent of production cost budget in corporations, and

v. Investment budget the equivalent of capital expenditure budget in corporations.

There are several methods of budgeting. The main ones are incremental budgeting on one hand and performance-oriented budgeting on the other. These are discussed below.

Incremental Budgeting

Incremental budgeting is the simplest approach to budgeting in the sense that it is derived from the current year's budget by adding amounts expected to be required by salary and wage increases and increases in the cost of supplies and equipment to be purchased. It focuses largely on resource inputs and uses the line-item budget format. In this respect incremental budgeting focus on departmental expenditures for specified objects, such as personnel, supplies, equipment, and travel (Earl, Leon and Susan, 1999).

Performance-oriented Budgeting

These categories of budgeting techniques stress the relation of inputs to outputs (quantities of work accomplished) and outcomes (impacts on goal and objectives). Performance-oriented budgeting attempts to identify fundamental objectives of the organisation. It estimate the organisation's future costs and benefits, and systematically analyse alternative ways of meeting its objectives (Ibid).

1. In Ghana Performance budgeting was introduced 1998 in the public sector and was applied up to 1999 in the form of Programme Linked Budgeting (PLB). This was later developed into the Medium Term Expenditure Framework - MTEF, (Adom-Frimpong, 2002). Other forms of performance-oriented budgeting include Zero-based budgeting and participative budgeting.

Medium Term Expenditure Framework (MTEF)

MDAs including the universities are required under the MTEF to state their objectives (Braimah, 2002). These objectives must reflect the broader objectives of the sector ministry (i.e. Ministry of Education Youth and Sports - MOEYS). The budgeting system is performance oriented. Consequently result planning is part of the inputs to the budget. In this vein all activities necessary for the universities to achieve their stated objectives must be clearly stated and quantified in monetary terms (in the budget) for purposes of fund allocation (Republic of Ghana, 1998, Draft Medium Term Expenditure Framework, Users Manual and Technical Guide for Budget Preparation by MDAs).

Zero-Based Budgeting (ZBB)

The dictionary of Investopedia (Investopedia.com, 2005) defines ZBB as a method of budgeting in which all expenditures must be justified each new period, as opposed to only explaining the amounts requested in excess of the previous period's funding. For example, if an organization used ZBB, each department would have to justify its funding every year. That is, funding would have a base at zero. A department would have to show why its funding efficiently helps the organization toward its goals.
ZBB is especially encouraged for Government budgets because expenditures can easily run out of control if it is automatically assumed what was spent last year must be spent this year (www.invstopedia.com).

According to ACCA, 2001, the basic concept of ZBB is that the very existence of each activity must be justified each year, as well as the amounts of resources requested to be allocated to each activity. The technique forces managers to consider all the costs of operations as if the organisation never existed.

Participative Budgeting

Most people will perform better and make greater attempts to achieve a goal if they have been consulted in setting the goal. The idea of participative budgeting is to involve employees throughout an organisation in the budgetary process. Such participation can give employees the feeling that "this is our budget" rather than the common feeling that "this is the budget you imposed on us."

While participative budgeting can be very effective, it can also have shortcomings. Too much participation and discussion can lead to vacillation and delay. Also, when those involve in the budgeting process disagree in significant and irreconcilable ways, the process of participation can accentuate those differences. Finally, the problem of budget padding can be severe unless incentives for accurate projections are provided (Earl, Leon and Susan, 1999).

The "Recommended" Method

The method of budgeting employed by MDAs and for that matter the public universities in Ghana, is dictated by the MOFEP. According to Adom-Frimpong (2002), government has for a long time adopted the incremental approach to budgeting. However, since 1998 efforts have been made by the ministry to blend programme budgeting with line-item budgeting. This shift has gone through systematic refinements. Currently, the ministry has succeeded in enforcing the use of the MTEF budgeting technique. All the public universities thus use the technique in their annual budgeting.

The method of budgeting employed may differ for different countries. According to Earl, Leon and Susan (1999), many governmental units in the USA have experimented with performance budgeting, programme budgeting, and ZBB. They noted that successful implementation of these approaches requires formulation of the unit's fundamental objectives.

However simple or sophisticated the method used to prepare a budget, to aid resource allocation process, such method can be effective only if the data inputs are sufficiently reliable.

2.3. THE BUDGETING PROCESS

This section discusses the budgeting process as obtained in the public and corporate sectors.

2.3.1 Public Sector Budgeting Process

Budgeting is a continuous process made up of interconnecting activities, which simultaneously interact throughout the budget period. There is therefore no clear-cut beginning nor ending of the process. In any case the process may vary from organisation to organisation depending upon the details required. According to Adom-Frimpong (2002), the following stages are typical of public budgeting process.

Formulation Stage

This may be regarded as the first stage of the budgeting process. It entails issuing guidelines for the preparation of the budget. The guide lines, which is often termed 'budget circular', provides directive as to how estimates are to be made, and under the MTEF disclosure of the sector ministry's objectives which all universities must include in their budget.

Authorization and Approval

This stage involves the following activities:

Cabinet discusses and agrees on the initial budgetary allocations. These preliminary allocations are agreed at budget hearings. After the Cabinet assent, the proposed budget becomes President's budget.

The Minister of Finance then lays the President's budget before Parliament for approval.

Parliamentary select committees of representing the various sector ministries discuss the budgetary proposals and submit their reports to Parliament. The Committees' reports are tabled and final agreement is reached. Sector Ministers then table motions for acceptance of their sector budgets. The sector budgets are than consolidated for an Appropriation Law to the passed.

Implementation Stage

The third stage of the budgeting process is Implementation. At this stage the Minister for Finance, having obtained Parliamentary approval and the passing of the Appropriation Bills, signs the General Warrant. The warrant conveys instructions to the Controller and Accountant General to utilize Expenditure sums as approved by Parliament. When an appropriation is approved, cash limits are set. In addition, limits are sometimes imposed either in gross or net terms to allow expenditure to vary inline with fluctuating revenues.

Evaluation Stage

This stage involves an assessment of performance, noting variances between planned and achieved targets. Areas of success as well as failure are noted and where specific objectives have not been met, remedial action is taken in the ensuing year. All the four stages are carried out simultaneously to ensure consistency and optimality in resources allocation.

2.3.2 Corporate Budgeting Process

Corporate budgeting, though very detailed, follows similar process as public budgeting. Lucey (1989), describes corporate budgeting as follows:

1. Formation of Budget Committee. The committee is charged with the responsibility of developing and coordinating the budget preparation process. Among others, the committee conducts review in the following areas:

a) Organizational objectives and long range plans

b) Past results and performances

c) Internal data on capacities, resources, etc

d) External data, e.g. economic trends, indices and market research

2. Forecast. This involves predictions of future events, which are expected to occur. Most preliminary forecast involves sales, which then ripples into planning for other functional areas such as purchasing.

3. Preparation of quantity budgets for appropriate functional areas. Budgeted sales volume (quantities) must be prepared to give an idea about materials, human resource and capital requirements. On that premise, other functional budgets can be prepared.

4. Checking the feasibility and goal congruence of the functional budgets. This is to ensure that the content of all the functional budgets are realistic, measurable and achievable within specified time limits. They must also adhere to the broader policies of the organisation.

5. Amend if necessary. Reports should be prepared for management regarding areas where deviations are envisaged. This is to is to preempt corrective actions before the situation get out of hand. In

computer software for budgeting feedback controls are incorporated which generate such reports.

6. Produce of financial budgets. The monetary implications of the quantity budgets described in 3 above are prepared. In monetary terms the following budgets must be prepared:

a) Sale budget, for budgeted income
b) Material procurement budget
c) Production budget
d) Human resource budget
e) Capital expenditure budget
f) Research and development budget
g) Cash budget

7. Preparation of master budget. Information from the above budget are collated to produce the master budget, which is the budgeted Trading profit and loss account, and budgeted Balance Sheet.

8. All the functional budgets together with the master budget must be submitted to the Chief Executive, in some cases to the Board of Directors study and subsequent amendments and approval. When

approved, the budget becomes an executive order and shows for each budget center an approved plan of action together with an appropriate level of expenditure. (Lucey, 1989).

9. Finally the approved budget is then published for the ensuing period.

2.3.3 Public and Corporate Budgeting in the USA

Earl, Leon and Susan (1999), explained that in corporate budgeting, each ongoing project, department, division, etc should be subjected to rigorous management scrutiny during budget preparation to make sure there is a valid reason for continuing the budget centre at all. This is the fundamental idea of zero-based budgeting. If the centre should be continued, then management must decide whether the budgetary allocation of resources (i.e. personnel, equipment, materials, money and space) to the centre is optimal. In a well-managed governmental unit, the same review is given to each continuing programme. The fact that a past legislative body authorized the programme does not mean the administration may shirk its duty to recommend discontinuance of a programme that has ceased to serve a real need. If the programme should be continued, in the opinion of the administration, the appropriate level of activity and the appropriate allocation of resources must be determined. This determination takes far more political courage and management skill than the common practice of simply extrapolating the trend of historical activity and historical cost (Earl, Leon and Susan, (1999), page 562).

If the administration is convinced that a programme should be continued and the budgetary allocation of resources is relatively appropriate, the preparation of the appropriations budget is delegated to the persons in charge of the programme.

In the case of a new programme, the administration states the objectives of the programme and sets general guidelines for the operation of the programme, then delegates budget preparation to individuals who are expected to be in charge of the programme when legislative authorization and appropriations are secured.

State laws or local ordinances typically require that certain steps be followed in the budgeting process and may prescribe dates by which each step must be completed. These requirements are referred to as the budget calendar.

In order to ensure that administrative policies are actually used in budget preparation and that the budget calendar and other legal requirements are met, it is customary to designate someone in the central administrative office as budget officer. In addition to the responsibilities enumerated, the budget officer is responsible for providing technical assistance to the operating personnel who prepare the budgets. The technical assistance provided may include clerical assistance with budget computations as well as the maintenance of files for each programme containing:

i. Documents citing the legal authorization and directives
ii. Relevant administrative policies
iii. Historical cost and workload data
iv. Specific factors affecting programme costs and workloads
v. Sources of information to be used in projecting trends.

An efficient budget system should be easy to developed, administer and should provide an incentives and rewards for measurable achievements. It should also articulate well with the organisation's (university's) mission.

2.3.4 Public Budgeting in Porto Alegre – South-Brazil

The participatory budgeting is being used by the City Authorities of Porto Alegre, a south-Brazilian town with 16 regions (districts) and 1.4

million inhabitants. The process of participatory budgeting covers an entire year and is repeated in more or less the same manner.

The cycle officially begins in March. Before the official start, the interested share of the population gather in small informal meetings to collect suggestions and demands towards the budget. Afterwards, the first official meetings are held in the 16 districts that Porto Alegre has been divided to, as well as six thematic assemblies that deal with subjects that affect the entire town. In those meetings - that are organised and supported by the administration - the previous year's plan of investments and its execution are evaluated and discussed.

Afterwards, the investment priorities of the residents of the region are collected and evaluated. In these meetings - that happen in two official rounds and an intermediate round - the permanent organs of the Participatory Budgeting Process (Orçamento Participativo - OP) are elected and officially introduced.

After the determination of the priorities the elected organs work on the draft of the budget and on a plan for the execution of the investment projects until the end of September. The Mayor passes the budget draft without changes to the city council for its final approval until the end of November. Meanwhile, the town planning agency and the OP-council work on the final investment plan on the basis of the investment budget. Finally, the OP-council prepares the work of the next council and supervises the execution of the determined projects (www.goethe.de).

2.4 The Benefits of Budgeting and Budget Variance

The importance of budgets cannot be overemphasized. It is a management tool, which aids the transformation of organizational objectives into achievable activities. Budgets provide a means through which management achieves goal congruence within the organisation. Other benefits are discussed below.

Coordination of activities

Budgets provide management with an opportunity to coordinate the activities of the various functional areas within the organisation. For example, the works and physical development (WPD) need to know the number of student to be admitted in the ensuing year in other to provide the requisite facilities. It presupposes that the activities of the academic section and the WPD should effectively be coordinated. This enhances goal congruence within the organisation.

Prior warning of problems

Budgets show expected results of future operations. For instance, the cash budget is capable of highlighting in advance possible cash shortages/surpluses. Management is thus pre-empted to look for possible cheaper sources of financing the cash shortage. On the other hand management will begin looking for viable short-term investment opportunities, if cash surplus is anticipated.

Enhanced managerial focus

Operating within budget implies that managers are forced to consider all aspects of an organisation's internal activities and also to make estimates of future economic conditions, including costs, interest rates, inflation, demand for the organisation's products, and the level of competition. Thus budgeting increases management's consciousness of the organisation's internal and external environment.

Performance evaluation

Budgets show the expected cost and expenses for each budget centre as well as the expected output, such as revenue to be earned or unit to be produced. Thus budgets provide a yardstick with which each department's actual performance may be measured.

Management Motivation

The process of budgeting and subsequent performance evaluation should be a source of motivation to budget holders rather than resentment and adverse reaction. If the budgeting process is designed to be participative, encourage initiative and responsibility, is not seen as a pressure device, then the motivation of individuals will be strengthened. Impossible targets poorly understood objectives and over emphasis on the short-term will demotivate management.

Budget Variance

Variance analyses assist management in their control function. Budgets contain planned activities to be undertaken, revenue to be generated and expenditure to be incurred in the future. Invariably, actual situation in these regard differ from the plan, thus creating what is known as budget variance, which could be adverse, or favourable. The challenge posed to management by the occurrence of variance is determining the extent and cause of each type of variance. Who and what is responsible for what type of variance must also be unravelled. This calls for critical and objective analyses of all categories of revenue and expenditure variances. To make it meaningful, budget variances must be reported separately in terms of the factors that caused them and the budget centre responsible. This will provide useful information for management to discharge its responsibility for controlling the affairs of the organisation. Several factors can lead to budget variances some of which are listed below.

i. Unrealistic targets may not be achievable, thus creating an adverse variance. This is a characteristic of over ambitious management. Also the desire to earn bonus or management commendation can be a bate setting unachievable targets.

ii. Unexpected significant changes in economic events can create budget variances. For instance cost-push inflation orchestrated by unexpected drastic increase in world market prices for fuel can derail business plans. This situation can however be averted if the budget team has strong forecasting abilities.

iii. Unexpected disaster may create crises and management may be compelled to shift resources (example manpower) to the crises area. This can create shortage of labour hours in other area.

iv. Management error. Inaccurate information may result in inaccurate estimation. Consequently actual data may not conform to the plan.

v. Neglect of budget guidelines can result in impulse spending. Where there is weak internal control, management may disregard the budget in the operations. This has the effect of bloating expenses.

vi. Poor estimation techniques caused by lower professional/academic qualifications and inexperience can result in poor budgeting, which can also lead to variances.

vii. Where performance appraisal is tied to the achievement of budgetary targets an incentive is created for management to unethically temper with budget inputs by intentionally underestimating revenue or overestimating cost. This act is known as budget padding.

CHAPTER THREE

A PROFILE OF THE UNIVERSITY FOR DEVELOPMENT STUDIES

The focus of this chapter is a presentation of the profile of the University for Development Studies (UDS). The historical perspective of a university for the north is discussed. Efforts, which were made since the colonial era and the factors that led to the establishment of the UDS have been unraveled. The aims and objectives and the organizational structure within which the university discharges its financial control function are highlighted. The chapter also discusses the academic programmes of the university. The problems that militated against the university's progress in its first 10 years of operations are identified. Finally, the university's capacity and the funding support it received from government are discussed.

3.1 THE ANNALS OF A UNIVERSITY FOR THE NORTH

The history of a university for the north of Ghana dates back to the pre-independence era. Bening (1990), documented that in November 1953 Ansah Koi argued for a university college for the north. Buttressing his point in the Legislative Assembly, Ansah Koi, on a debate for a second secondary school in the then northern Territories, regretted that there was only one secondary school in a Region surrounded by three French colonies. He saw the need for the region to advance educationally so that the people could defend themselves and Ghana's international boundaries, especially, as the country moved towards self-government and total political independence. He further explained that the attainment of a high level of literacy would enable the inhabitants to do most of the things they require by themselves. Ansah Koi advocated for more secondary schools, Colleges and probably a University College in the region (Gold Coast, 1953).

Several attempts have been made to get a university for the north. For instance, according to Bening (2005), in 1962, Mununi Bawumia, the then Regional Commissioner for Northern Region, revisited the issue of a university for the north without success. Bening stated that Bawumia presented a petition to President Kwame Nkrumah requesting the transfer of the Faculty of Agriculture at the University of Ghana to form the nucleus of a university in Tamale. This did not succeed. Also in 1974, Bawumia's appeal to the Chairman of National Redemption Council (NRC) to establish a university in the north did not also succeed. In 1975, the government of the Supreme Military Council (SMC) requested the National Council for Higher Education (NCHE) to examine the issue of establishing a university for the north.

This was a reaction to further presentations on the matter from Bawumia. According to Bening (2005) the NCHE referred the matter to the Committee of Vice-Chancellors who in turn, appointed a committee to examine the matter in detail. The committee was tasked to consider the possibility of locating an Agricultural University in the North. The committee's recommendations were in favour of establishing a university for the north. Meanwhile, in 1976, the NRC government announced its intention to establish an Agricultural University in the North. This perhaps was due to location advantage and persistent pressure from northerners. In the five-year Development Plan, the need "to correct the present imbalance and disparity in the distribution of educational facilities in the country" was expressed (Ghana, Guidelines for Five-Year Development Plan, 1975, 26).

As the panorama unfolded, certain compelling factors emerged which facilitated the establishment of a university in the north. It was observed that demand for university education by qualified students outweighs facilities in the existing three universities namely, University of Ghana Kwame Nkrumah University of Science and Technology and University of Cape Coast. This compelled qualified but unsuccessful applicants to seek university education outside the country. According to Professor Bening, the interest of students for further education and for particular disciplines declines appreciably in proportion to the geographical distance between higher (educational) institutions and where they (the students) live. Thus, Ghanaians living in the northern part of the country suffered competitive disadvantage in terms of university education. Further, it was observed that the students from the north recorded the lowest passes. School attendance was also low in the region. Hopes were that a local university will provide university education for the disadvantaged and also serve as a morale booster to lower educational institutions.

3.2. LEGAL AND INSTITUTIONAL FRAMEWORK OF UDS

The efforts of the Provisional National Defends Council (PNDC) culminated into the establishment of the UDS. In line with its educational reform programme, the PNDC's target was to provide quality and accessible education for the people of Ghana. The government was also focused on enhancing the relevance of education to meet the needs of the people and their communities. To achieve this target in the north, the government saw the need to establish a university for the northern part of the country. This brought about the Benneh Task Force in 1990 (Bening, 1999). This Task Force was to prepare a programme of action for the establishment of a university in northern Ghana that will concentrate on the field of agriculture, medical and health sciences and integrated development studies.

After the submission of the Benneh Report, an Executive Task Force, 1992, (ExTaF) was established under the Chairmanship of Brigadier (Dr.) G. K. Deh in 1991. The ExTaF was to reappraise the Benneh's Report and to draw up an implementation programme. The output of the ExTaF was a Report, which included syllabi for proposed courses in agriculture and an action plan for the smooth take off of a university.

Government accepted the Report, which was submitted in February 1992, and passed as law, PNDCL 279, establishing the University for Development Studies (UDS) with effect from 15th May 1992.

According to Section 2 of the PNDCL 279 establishing the university, the aims of the UDS, as contained in another Report by Professor Beneing (1999), are as follows:

1. To provide higher education to all persons suitably qualified and capable of benefiting from such education;

2. To undertake research and promote the advancement and dissemination of knowledge and its application to the needs and aspirations of the people of Ghana; and

3. To blend the academic world with that of the community in order to provide constructive interaction between the two for the total development of northern Ghana in particular and the country as a whole.

Presently, the Vision of the university is "to be the home of world-class pro-poor scholarship". To achieve this vision, the university is focused on:

i. Promoting equitable and socio-economic transformation of communities through: practical-oriented; community-based; problem-solving; gender-sensitive and interactive research, teaching, learning and outreach programmes.

ii. Providing higher education to all persons suitably qualified and capable of benefiting from such education.

iii. Positioning itself as a national asset in the facilitation of life long learning; and

iv. Developing its information and communication technology infrastructure as the driving force for: the education of more people more rapidly, and the improvement of efficiency, and academic quality in order to advance community and national development (Marketing unit, UDS, 2004).

The focus of the university is community-based. In this regard, the principal objective of the university is to address and find solutions to the socio-economic deprivations and environmental problems which characterize northern Ghana in particular and which are found in pockets and in varying degrees in rural areas throughout the rest of the country.

The University is expected to blaze a new trail in higher education in Ghana by effectively combining academic studies with field practical training. The University is to produce men and women who are practical oriented without sacrificing academic excellence.

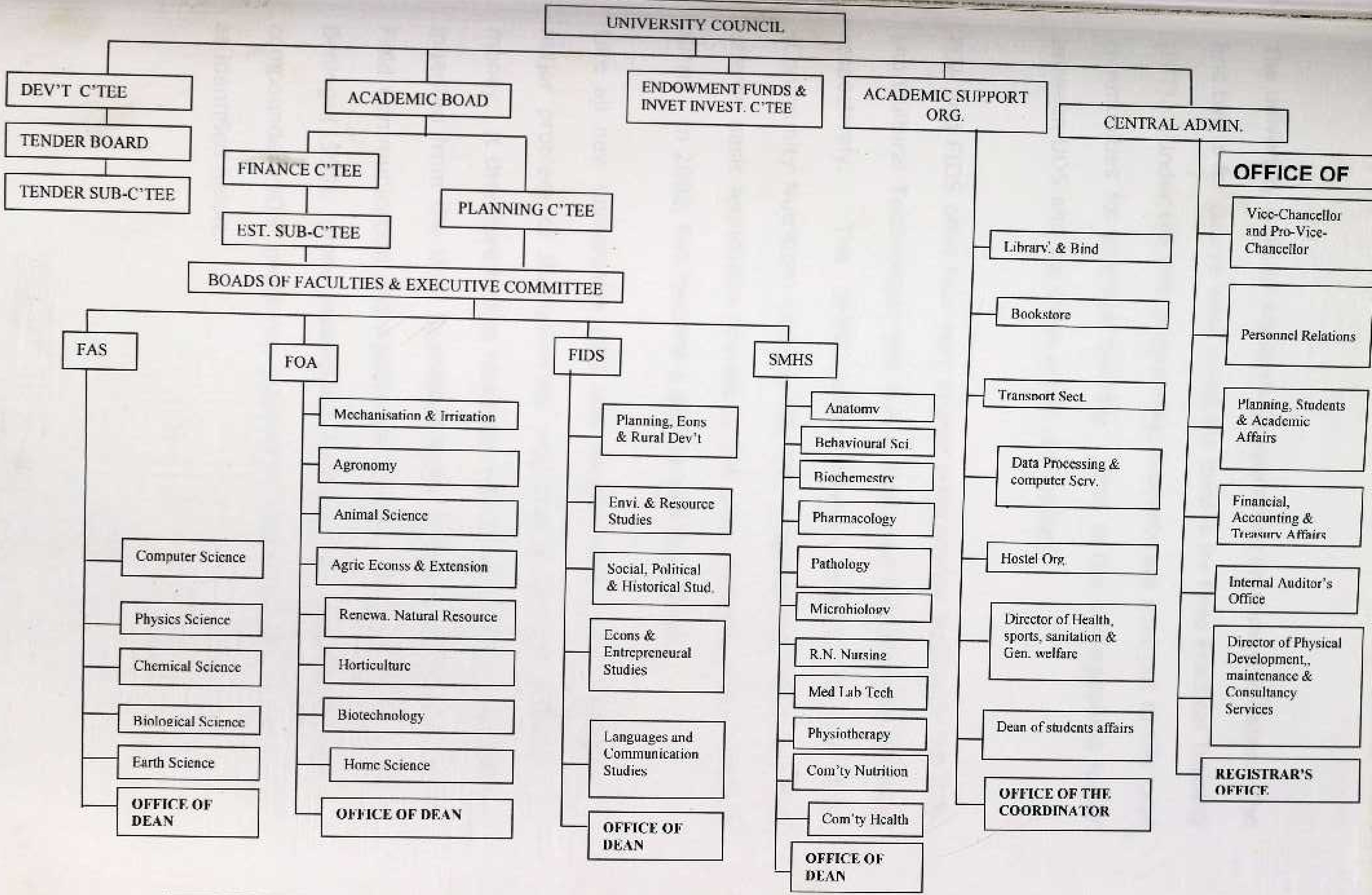
The Institution is required to prepare individuals to establish careers in their chosen areas of specialization. Through its Student-centered, Problem-based, Integrated Community-oriented and Extension Services (SPICES), it is to train medical practitioners who would be prepared to live and work in deprived rural communities. To achieve this the university is mandated to develop and maintain close relationship with the various peoples of northern Ghana in particular and the rest of the people in Ghana as a whole.

The University is committed to grow into a center of excellence, providing quality teaching and learning producing people with enormous practical skills and offering useful practical solutions to the problems of the rural poor and deprived communities in the country and beyond (Kaburise, 2003). This reflects the vision of the university, which is "to be the home of world-class pro-poor scholarship".

3.3 ORGANOGRAM AND THE PHYSICAL STRUCTURE OF THE UDS

UDS has a multi-campus structure. Sequel to the enactment of PNDCL 279, the UDS commenced academic work in September 1993 with the first batch of forty (40) students admitted into the Faculty of Agriculture. Three other Faculties were phased in from 1994 to 2002. Currently, the university runs courses under four faculties namely, Faculty of Agriculture (FOA), Faculty of Integrated Development Studies (FIDS), Faculty of Applied Sciences (FAS) and Medicine and Health Sciences (SMHS). All these and other divisions are presented in the financial control Organogram of the university in Figure 3. There is also a Centre for Inter-disciplinary Research (CIR) which co-ordinates the research activities of all the Faculties to ensure an integrated research programme. The university also runs a Postgraduate programme in development studies. All the faculties are geographically dispersed with Tamale housing the Central administration. FOA and SMHS are located in the northern region (respectively, Nyanpkala and Tamale). FAS is located in Navrongo in the Upper East region whilst FIDS is accommodated in Wa in the upper West region. The CIR and the Postgraduate are in Navrongo campus.

The university has not attained its full capacity, as some academic and academic-support departments are yet to start in a number of the faculties. In FAS, the department of Earth Science is not yet operational. The Home Science department is yet to take off in FOA. Most of the departments in SMHS are yet to start. For academic support the following departments are yet to be started. They are Data Processing and Computer Services and Hostels Organisations. Currently, the Pro-Vice-Chancellor is the Acting Dean of Students Affairs. Further because it is not yet fully operational, the SMHS send its students to KNUST and University of Ghana for further training. The Kintampo campus is yet to start.



Source: UDS. Stores and Financial Regulations. 1995

The university runs its academic programmes on trimester bases. The first two is for course work whilst the third is for Field Practical Training (FPT). Under the FPT programme, students are sent out to the local communities for practical training. This is the distinguishing factor between UDS and the other public universities.

FOA and FIDS offer four-year degree programmes leading to the B.Sc (Agricultural Technology) and B.A. (Integrated Development Studies) respectively. The SMHS offers courses leading to the B.Sc (Community Nutrition) and the MB, ChB programmes, whilst the FAS offered basic foundation courses to first year students in the FOA and SMHS. In 2002, FAS became a degree-awarding faculty.

Like all new universities UDS was saddled with initial problems. A major problem of the university was that it took-off without seed money. It therefore had to make do with the dilapidated structures it inherited from the then Nyankpala Agric College and the Institute of Field Communication and Agricultural Training (IFCAD). According to Bening (1999), gross inadequate funding from the beginning also compounded UDS' problems, generating ripple effects in other areas as identified below.

i. Insufficient teaching and research laboratories and lecture halls

ii. Inadequate laboratory equipment and consumables

iii. Inadequate library facilities

iv. Inadequate hostel facilities for students

v. Inadequate farm implements

vi. Poor communication links between Tamale and the various campuses.

vii. Inadequate vehicles

viii. Understaffing in some departments

In general the university has suffered inadequate funding for both recurrent and capital expenditures since it inception. Table 3.1 shows a summary of budget estimates and government subvention for UDS from 1994 to 2003.

Table 3.1: Summary of Budget Estimates and Government Subvention - 1994 to 2003

Year	Recurrent			Capital		
	Budget ¢ billion (a)	Release ¢billion (b)	% (c=b/a)	Budget ¢ billion (d)	Allocation ¢ billion (e)	% (f=d/e)
1994	1.50	0.46	31	3.52	1.22	35
1995	1.63	0.47	29	7.39	1.52	21
1996	2.62	1.02	39	12.60	2.11	17
1997	3.20	1.61	50	16.06	2.38	15
1998	11.17	1.94	17	38.82	3.08	8
1999	8.50	3.81	45	9.24	4.42	48
2000	10.64	5.64	53	7.72	5.36	69
2001	14.00	8.96	64	16.83	6.67	40
2002	10.50	14.38	137	14.93	8.57	57
2003	19.74	17.65	89	137.08	20.56	15

Source: Extracts from UDS annual Budget Estimates and Audited Accounts (1994-2003). Conversion to ¢ billions and percentages are author's.

Table 3.1 confirms Professor Bening's accession that the university suffered gross inadequate funding from its inception. Especially with regard to capital expenditure, the university received only 35% of it capital budget in 1994. The allocations then assumed a downward trend up to 1998, when the actual release was only 8% of the university's request. The funding for capital expenditure improved between 1999 and 2002 during which funding did not fall below 40% of the amounts requested.

However, the funding situation deteriorated again in 2003, when only 15% of the capital budget was released to the university. Funding for recurrent expenditure was equally bad during the study period. However, it appears from Table 3.1 that subvention for recurrent expenditure has improved between 2000 and 2003. For instance recurrent subvention in 2002 exceeded the university's request by 37%.

The university is also disadvantaged on the grounds of distance. Intra faculty commuting and travelling to and fro the national capital has not only become a characteristic of the university's officials, but also involve a lot of money.

School of Medicine and Health Sciences (SMHS)

The SMHS was set-up in 1996 with 14 student admitted into various programmes in the school. The school is expected train intermediate health care personnel whose orientation would, among others, cause older forms of patient care to give way to new ones, including the moving of care outside hospitals and other institutions to the community (Bening, 2005).

The aim of the SMHS was therefore, to train medical assistants and other health professionals side by side with the doctors and hence the name of the school. It was the anticipation of the NCTE that the UDS should be able to provide balanced medical education, which would equip the SMHS graduate to follow in Ghana any of a variety of careers in medicine to his and his patients' satisfaction (ibid, 83).

The curriculum of the SMHS is integrated problem-based learning and community-oriented. To enhance interdisciplinary cooperation the SMHS was organized into divisions, which comprise functionally related divisions as follows (ibid, 83):

- Division of Basic and Theoretical Medicine
- Division of Diagnostics and Laboratory Medicine
- Divisions of Operative Medicine
- Division of Internal Medicine

The approach to be used in training students should be problem-based, student-centred, interdisciplinary, and community-oriented. The method of training will ensure that students explore disciplines at their own initiative, experience health care practice at an early stage and learn to address actual problems of the community (NCTE, 2005, 32).

The admission requirements into the SMHS are as follows:

- The normal University entry requirements
- Medical Assistants with three-year diploma programme of the SMHS and with a minimum of 5 years practice experience can apply for training as doctors.
- According to NCTE, (2005), applicants with the following qualification could be considered for admission
    i. Final certificate of a recognized post secondary health training institution for nurses, X-ray technicians, dispensary and medical laboratory technicians. A minimum of 5 years post-qualification field experience was an additional requirement.
    ii. Candidates from post-secondary training institutions with the final certificate (with science bias) and who had five years working experience could also be admitted. Holders of good GCE A' level in two approved subjects with sum years of working experience were also eligible for admission.

iii. All candidates for admission were to be interviewed by a properly constituted panel.

Nine years after its take off the SMHS is still saddled with logistics problems. Consequently, fourth to final year students of the school are sent to University of Ghana and KNUST for support. The UDS however award the degrees.

3.4. ENROLMENT AND HUMAN RESOURCE CAPACITY

As indicated in Table 3.2, with a humble beginning of 40 students in 1993, the student population increased to 2889 in 2003. The annual intake of students has also increased from 40 in 1993 to 1140 in 2003.

Female intake has increased considerably over the years. With 10% of the total intake in 1994, the female admission increased to 26% of the 2003 intake. Though there are no industry figures for comparison, the university seem to be doing well towards gender balance in the student population. A further boost has been given to female intake via the bridging programme, which was introduced in 2003.

Table 3.2: Annual Student Enrolment by Gender – 1993 to 2003

Year	Male (a)	Female (b)	Total Enrolment by Year (c)	Percentage of Female intake (d=b/c)	Cum Total
1993	40	0	40	0%	40
1994	89	10	99	10%	139
1995	30	7	37	19%	176
1996	88	17	105	16%	281
1997	149	20	169	12%	410
1998	177	32	209	15%	520
1999	134	24	158	15%	641
2000	156	34	190	18%	749
2001	322	111	433	26%	1045
2002	785	240	1025	23%	1911
2003	838	302	1140	26%	2889

Source: Extracted from Vice-Chancellor's Report, Third congregation, UDS, 2003, p76. Percentages are author's

Under the programme, female students who are marginally qualified are given one year pre-university training. They are then absorbed into the main degree programme based on merit.

For more details on student enrolment (1993 to 2003) refer to the appendix.

As in January 2003, the academic staff of the UDS numbered 88 (see Table 3.3

Table 3.3: Statistics of Academic Staff (In January 2003)

Category	FACULTIES					
	VC	FOA	FAS	FIDS	SMHS	Total
Professor	1	2				3
Associate Professor		1				1
Senior Lecturer		4	3	3		10
Lecturer		30	10	22	12	74
Assistant Lecturer		0	0	0	0	0
Total	1	37	13	25	12	88

Source: Extracted from Vice-Chancellor's Report, Third congregation, UDS, 2003, p79

The 88 academic staff is supported by 388 non-academic staff, giving ratio of 1:4.

In terms of academic staff categories the university has 3 professors, 1 Associate Professors, 10 Senior Lecturers and 74 Lecturers as shown in Table 3.3.

3.5. THE BUDGETING SYSTEM OF THE UDS

The product of the UDS budgeting system is a composite budget made up of recurrent and development estimates. The Finance Office produces the recurrent budget, whereas the Works and Physical

Development (WPD) Office prepares the development or capital budget. The study has found that a budget committee is yet to be constituted.

There is a budget section within the Finance Office, which is charged with the responsibility of producing the recurrent budget. The section was established in 2001 as a vote management unit. It became fully operational as budget section in 2002. Throughout the year, this department monitors the expenditure pattern of the university. This is made possible by capturing all information on documents meant for payments to gives an idea of the expenditure pattern of the university. It also forms the bases of estimates for the ensuing year. Based on the database of the preceding year's expenditure pattern, the budget officer then prepares the budget estimates for the following year using an incremental percentage. The estimates, in the form of a draft budget, are then presented to the Finance Officer for his scrutiny and acceptance.

The capital expenditure budget consists of estimates for:

- Construction works;
- Rehabilitation; and
- Plant, equipment, furniture and vehicles.

The WPD solely produces this budget with inputs from stakeholders such as Deans and HODs. Budget circulars are sent by the WPD to deans and heads of departments soliciting their inputs, especially on plant, equipment, furniture and vehicles. The circular, which is in a prescribed format, is sent at a month notice. The returns from the deans and HODs are collated into a plant, equipment, furniture and vehicles budget. Estimates for construction and rehabilitation works are the sole responsibility of the WPD. Uncompleted projects are rolled over to the next budget estimates with adjustments made based on prevailing and expected prices for building materials.

The completed development budget is discussed and agreed at management level and copy given to the budget officer in the Finance Officer to compile the composite budget.

Weaknesses in the Budgeting System

The study has identified a number of weaknesses inherent in the UDS budgeting system. These weaknesses are discussed below.

i. Poor Human Resource Situation of the Budget Section

The budget section, which should have been manned by five staff, was a one-man section, as confirmed by the results of the focus group discussion with staff of the Finance Office (See Box 3). This situation resulted in problems such as poor organisation of the whole budgeting activities.

Box 3: Comments on Staff View of UDS Budget Section

- The office is a one-man department.
- The budget section is always occupied by new people who know little about the university' budgeting system.
- This Section has the highest staff turnover.
- This old computer was recently given to the budget unit...sometimes you can't start it. ...the printer doesn't print.
- The 2004 budget was prepared in Accra...by the F.O. and one staff from the data processing section
- The Deans and the HODs have nothing to offer when it comes to the budget.

(Author's Results of Focus group discussions with staff of the Finance Office – October 2004.)

ii. Low Academic and Professional Qualification

Poor human resource base of the budget section has been identified as a weakness to the university's budgeting system. The first substantive sectional head for the budget section was a holder of RSA. Such a low level human capacity is unlikely to competently handle the complexities of the MTEF.

iii. High Staff Turnover

High staff turnover in the budget section compounds the staffing problem of the section. Training has to be organised for every new staff who takes over the section to acquaint him with the requirements of the budgeting system. This is recipe for errors in the budget as new hand are susceptible to mistakes.

iv. Poor Understanding of NCTE's Budget Manual

Poor understanding of the budget manual from the NCTE is a problem. In 1999 when the university was switched to the MTEF, the manual, which was sent, provided little guidance to the budget preparation.

v. No Budget Committee

The university has no budget committee consequently; the budget preparation process is left to the Finance Officer and the WPD. An independent supervisory body does not oversee the process. This creates 'your budget' mentality among senior officers, especially the academics.

vi. Poor Coordination

The WPD prepares the capital expenditure budget with little input from the finance office. Similarly, the WPD is not consulted on recurrent matters. However the two departments need substantial input from one another. For instance, the WPD need to provide estimates regarding minor repair and maintenance works.

vii. Inadequate Participation In the Budget Preparation

The inputs of Deans and HODs are significant to the budget they are part of the university's policy formulation and implementation. These significant inputs are captured by the budget because Deans and HODs are not involved in the budget preparation. This creates problems when it comes to the budget implementation. Because they did not make an input it is difficult to force down expenditure control measures on them.

viii. Lack of Budget Manual

The university has no budget manual to guide the budget preparation process. This results in ad hoc budgeting. The inconsistencies identified in the budget estimates are also traceable to this phenomenon.

ix. Inconsistencies in Budget Estimates

Trend analyses of the annual budget estimates show gross inconsistencies in the budget. For instance, in 1998 the budget estimates for recurrent expenditure was ¢11.17 billion cedis. This fell to ¢8.5 billion cedis in 1999. This is perhaps due to the fall in inflation from 15.7% in 1998 to 13.8% in 1999. The same reason may be assigned to the fall in the recurrent estimates from ¢14 billion cedis in 2001 to ¢10.5 billion cedis in 2002. This is because inflation fell from 21.3% in 2001 to 15.2% in 2002. However, the budget estimates are prepared in advance such that 2001 estimates for instance were prepared in 2000. Therefore if the 2001 estimates would reflect inflation rate at all, that should be at 2000 inflation rates because, that was available at the time of the 2001 estimates was prepared. These inconsistencies erode the confidence of NCTE in the university's budget, and consequently may adversely affect the amount of subvention released to the university.

x. Inadequate Time Allowed for the Budget Preparation

One other weakness of the budgeting system identified by the study is time allowed for its preparation. Almost invariably, the budgets estimates are prepared in a rush. This makes the estimates vulnerable to errors and omissions.

xi. Secondary Status

The budget function has been a subservient to the payroll unit from 1994 to 2001 when a section was created for it. The lack of fulltime attention for the budget function might have resulted in errors in its preparation.

xii. Inadequate Information

The importance of information in the budget preparation cannot be overemphasised. The quality of the budget depends on the accuracy of its inputs and how relevant and timely such inputs are received. The study however identified lack of quality as a problem hindering the budgeting process of the university. This is principally due to poor filing and recording system of the Finance Office.

xiii. Important Omission

The study has revealed that the university did not incorporate internally generated funds in its recurrent budget over the study period. Meanwhile substantial funds can be generated from student fees, sale of admission forms, penalty for late registration, administrative charges on projects etc. This omission is perhaps a deliberate attempt not to disclose the income generating ability of the university, although inadequate information could also be a contributory factor.

CHAPTER FOUR

DISCUSSIONS AND ANALYSIS OF RESULTS

This chapter presents analyses of data and discussion of results. The method of budgeting used by the UDS is ascertained and discussed. Variances from the university's budget estimates and actual subvention released are computed and their causes identified. The results of hypotheses tested are presented and conclusions drawn thereof. Tables, charts and Student t-test are used to analyse data collected. Finally, in-depth discussions of the findings are presented.

4.1. INCREMENTAL BUDGETING ANALYSIS FOR UDS

The university from its inception in 1993 to 1997 used the Incremental Budgeting (IB) method. Under this approach, an agreed percentage is slapped on the previous year's figures to derive the current year's budget. For instance the study found that the 1997 recurrent budget of ¢3.20 billion cedis was derived from the preceding year's (1996) budget of ¢2.62 billion cedis. This was arrived at by augmenting most of the 1996 expenditure items by 25%. The study found that this multiplier was not constant. Instead it varied based on the type of expenditure and the year under consideration. Estimates for salaries were based on the manpower budget and adjusted current salary levels. On capital expenditure budget, the study found that the preceding year's figures were increased by an agreed percentage and adjusted by prices of building materials.

The constituents of the recurrent budget were item one (1) on one hand and items two to five (2-5) on the other. Item one (1) was staff salaries and other items related to staff emoluments: part-time claims, external examiners claim etc. Item two (2) comprised of items related to Travelling and Transport (T&T) expenditure; minor Repair and Maintenance (R&M) and related items were categorised under item three (3) and item four (4) was direct academic expenditure, consisting of teaching, research and other consumables related to academic functions. Finally General Office expenses, made up of office supplies, utilities and other miscellaneous expenses were grouped under item five (5). The study found that subvention for item 2-5 was released on quarterly bases, whereas Item 1 was released monthly.

The average release by government to the university for recurrent expenditure during the incremental budgeting era was ¢890 million cedis. This represents about 40% of the average budget estimates for the period. The highest release for recurrent budget was in 1997 when 50% of the request was released. These and other details are shown in Table 4.1.

Table 4.1: Actual Release for UDS Recurrent and Capital Budget 1994 to 1997

Year	RECURRENT			CAPITAL		
	Budget Estimates	Actual Release	Percentage of Actual Release to Budget	Budget Estimates	Actual Release	Percentage of Actual Release to Budget
	(a)	(b)	C= (a/b)x100	(d)	(e)	F= (a/b)x100
	¢ bn	¢ bn	%	¢ bn	¢ bn	%
1994	1.50	0.46	31	3.52	1.22	35
1995	1.63	0.47	29	7.39	1.52	21
1996	2.62	1.02	39	12.60	2.11	17
1997	3.20	1.61	50	16.06	2.38	15
Average	2.24	0.89	40	9.89	1.81	18

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Percentages are author's own calculations.

On capital budget, Table 4.1 shows that on the average, ¢1.81 billion cedis was released for capital expenditure. The lowest release was in 1994 whilst 1997 recorded the highest release. This is perhaps due to increase in student population from 139 in 1994 to 305 in 1997.

Incremental budgeting has some setbacks. First it is not scientific, as arbitrary percentages are used to augment the previous year's figures to derive the current budget. Secondly, items in the budget do not reflect the university's strategic objectives. This means that the sector Ministry's objectives are not reflected in the university's budgets. This was the reason, which led to change to the PLB.

4.2. PROGRAMME LINKED BUDGETING ANALYSIS FOR UDS

The PLB was used for two years (in 1998 and 1999). Under this approach of budgeting the university's budget was prepared on the basis of its programmes or activities. The activities were however restricted to recurrent budget only. The components of the PLB were:

- Personnel Emoluments, comprising of staff salaries and related items;
- Administration Activities, made up of all over expenses other than those related academic activities;
- Service Activities, which constitute academic expenditure; and
- Investment Activities, otherwise known as capital expenditure.

Principally, student numbers dictated what activity was to be budgeted for and the amount of funds involved. The implication was that universities with smaller student numbers were to have smaller budgets. This did not favour the UDS because for 1998 and 1999 the student population of the university was relatively small. The study therefore found that 1998 was one of the years, which recorded the lowest releases both for recurrent and capital expenditures as indicated in Table 4.2.

Table 4.2: Actual Release for UDS Recurrent and Capital Budget 1998 and 1999

Year	RECURRENT			CAPITAL		
	Budget Estimates	Actual Release	Percentage of Actual Release to Budget	Budget Estimates	Actual Release	Percentage of Actual Release to Budget
	(a)	(b)	C= (a/b)x100	(d)	(e)	F= (a/b) x100
	¢ bn	¢ bn	%	¢ bn	¢ bn	%
1998	11.17	1.94	17	38.82	3.08	8
1999	8.50	3.81	45	9.24	4.42	48
Average	9.84	2.88	29	24.03	3.75	16

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Percentages are author's own calculations.

A reasonable inference is that the low student numbers might have accounted for this phenomenon.

4.3. MEDIUM TERM EXPENDITURE FRAMEWORK ANALYSIS FOR UDS

The study found that all the five public universities in the country use the MTEF technique of budgeting. The technique aligns budgets to organisational (strategic) plans. This means that every item of cost in the budget should support a particular objective, which goes to sustain the policy and plan of the university. It also means that for the UDS to have a good budget, it must have a good strategic plan. The study however found that the university produced its first operational five-year strategic plan (2003 – 2008) in 2003. The implication is that the university's MTEF budgets from 2000 to 2003 did not have an input from the strategic plan. Instead they were good feed from the five-year development plan (1997 - 2001), which the university prepared in October 1996. This is perhaps due to the strategy of the WPD to rollover unaccomplished development projects to the next budget.

However, the MTEF budget system seems to favour the UDS than the incremental and PLB systems. As shown in Table 4.3, the average release for recurrent and capital expenditures (in absolute terms) were ¢11.66bn and ¢10.29bn respectively under the MTEF system.

Table 4.3: Actual Release for UDS Recurrent and Capital Budget 2000 to 2003

Year	RECURRENT			CAPITAL		
	Budget Estimates	Actual Releas e	Percentage of Actual Release to Budget	Budget Estimat es	Actual Release	Percentage of Actual Release to Budget
	(a)	(b)	C= (b/a)x100	(d)	(e)	F= (e/d)x100
	¢ bn	¢ bn	%	¢ bn	¢ bn	%
2000	10.64	5.64	53	7.72	5.36	69
2001	14.00	8.96	64	16.83	6.67	40
2002	10.50	14.38	137	14.93	8.57	57
2003	19.74	17.65	89	137.0	20.56	15
Average	13.72	11.66	85	44.12	10.29	23

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Percentages are author's own calculations.

In contrast, the average releases for same expenditures were below ¢1.5bn for recurrent and ¢1.9bn for capital expenditure in the same period. The dramatic improvements in the government releases to the university over the MTEF period can be ascribed to two main factors. The first is the remarkable increase in student numbers over the period. With 749 students in 2000, the student population increased dramatically over the three years to 2,889 in 2003. This remarkable performance requires massive recurrent costs (staff and other running costs) and capital injection for infrastructural support. The second is the consistency in the presentation of the development budget from the WPD. For instance items in the 1996 development plan appeared in the 2000-2002 MTEF budget. This consistency and vigilance of the WPD might have won the sympathy of the NCTE and the MOEYS.

4.4 BUDGET VARIANCE ANALYSIS FOR UDS

Budget variance is the difference between the budget estimates presented to government, and the actual release by the government. Table 4.4 shows details of recurrent and capital budget variances for UDS for the 1994 to 2003 period.

From Table 4.4, it is clear that with the exception of 2002, when actual release for recurrent was 37% above budget estimates, the university received less than its recurrent budget presented. On the average the university received about 64% of its recurrent budget in the ten-year period. The lowest actual release was in 1998 when only 17% of budget was released.

Table 4.4: Variances in UDS Recurrent and Capital Budget 1994 To 2003

Year	RECURRENT				CAPITAL			
	Budget Estimate	Actual Release	Variance	Percentage of Actual Release to Budget	Budget Estimates	Actual Release	Variance	Percentage of Actual Release to Budget
	(a)	(b)	c= a-b	d= (b/a)%	(e)	(f)	g=e-f	h= (f/e)%
	¢ bn	¢ bn	¢ bn	%	¢ bn	¢ bn	¢ bn	%
1994	1.50	0.46	1.04	31	3.52	1.22	2.30	35
1995	1.63	0.47	1.16	29	7.39	1.52	5.87	21
1996	2.62	1.02	1.60	39	12.60	2.11	10.49	17
1997	3.20	1.61	1.59	50	16.06	2.38	13.68	15
1998	11.17	1.94	9.23	17	38.82	3.08	35.74	8
1999	8.50	3.81	4.69	45	9.24	4.42	4.82	48
2000	10.64	5.64	5.00	53	7.72	5.36	2.36	69
2001	14.00	8.96	5.04	64	16.83	6.67	10.16	40
2002	10.50	14.38	(3.88)	137	14.93	8.57	6.36	57
2003	19.74	17.65	2.09	89	137.0	20.56	116.44	15
Average	8.35	5.59	2.78	64	26.41	5.59	20.82	21

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances and percentages are author's own calculations

The highest release was in 2002 when 137% of the budget was released to the university. The explanation to this phenomenon is that the 2002 budget was under estimated. Further, due to problems in the information system, some releases for capital expenditure was recorded as recurrent. This had an increasing effect on the recurrent subvention.

The average release for capital budget was 21% over the period. The highest release was in 2000 when 69% was released as against the

8% release in 1998. It appears from Table 4 that the least budgetary release for recurrent and capital budget was in 1998.

The study found that a number of factors were accountable for the high budget variance over the study period. These include low student numbers, inconsistencies in the university's annual budgets and unrealistic budgeting. It was found that the timeframe within which the budgets were prepared was short for any realistic budgeting. Relevant areas, which could win good points for funds release, were de-emphasised. Further, the university's inability to effectively defend its budget at the annual budget hearing was identified as a cause of the variance.

4.5. RESULTS OF HYPOTHESES TESTING

As shown in Table 4.4, the university recorded unfavourable budget variances for both recurrent and capital expenditure throughout the ten-year period, with the exception of 2002. Unfavourable variance is where actual release is less than budget estimates. The study seeks to establish the relationship between actual subvention released to the university and the method of budgeting used. The aim is to identify whether the method of budgeting used can influence government decision regarding the release of funds to the university. To establish this, the hypotheses of the study are tested using the t-test. The test is conducted at 95% confidence level using two-tailed test carried out for both recurrent and capital subventions.

Hypotheses 1

H_0: *There is no significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting (IB) and PLB (H_0: $\mu\bar{a}_1 - \mu\bar{a}_2 = 0$)*

H_1: *There is a significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting(IB) and PLB (H_1: $\mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)*

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for recurrent expenditure under IB and PLB respectively.

Table 4.5: Subvention Release for Recurrent under Incremental Budgeting and PLB

Incremental Budgeting			PLB		
Year	Release (¢ b)	Variance	Year	Release (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1994	0.46	0.18	1998	1.94	0.87
1995	0.47	0.18	1999	3.81	0.87
1996	1.02	0.02	-	-	-
1997	1.61	0.52	-	-	-
Σ	3.56	0.90	Σ	5.75	1.75
$\bar{a}_1 = 0.89$			$\bar{a}_2 = 2.88$		
$\sigma_1 = \sqrt{0.90} = 0.95$			$\sigma_2 = \sqrt{1.75} = 1.32$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

From the data in Table 4.5, the calculated t-value yields –1.9, whereas the critical theoretical value of t, at 5% level of statistical significance and 4 degree of freedom, yields 2.571 (or –2.571). Since –1.9 is less than –2.571, the original hypothesis is not rejected. Thus results show that there is no significant difference between the mean (average) of subvention received under Incremental Budgeting (IB) and PLB.

Hypotheses 2

H_0: *There is no significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting (IB) and MTEF* (H_0: $\mu\bar{a}_1 - \mu\bar{a}_2 = 0$)

H_1: *There is a significant difference between the mean (average) of subvention received for recurrent expenditure under Incremental Budgeting(IB) and MTEF* (H_1: $\mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for recurrent expenditure under IB and MTEF respectively.

Table 4.6: Subvention Release for Recurrent under Incremental Budgeting and MTEF

Incremental Budgeting			MTEF		
Year	Release (¢ b)	Variance	Year	Release (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1994	0.46	0.18	2000	5.64	36.24
1995	0.47	0.18	2001	8.96	7.29
1996	1.02	0.02	2002	14.38	7.39
1997	1.61	0.52	2003	17.65	35.88
Σ	3.56	0.90	Σ	46.63	86.80
$\bar{a}_1 = 0.89$			$\bar{a}_2 = 11.66$		
$\sigma_1 = \sqrt{0.90} = 0.95$			$\sigma_2 = \sqrt{86.8} = 9.32$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

From Table 4.6 the t statistic calculated to 2.301 and the t distribution table gives a critical value of 2.365. This makes the null hypothesis valid, implying that there is no significant difference between the mean (average) of subvention received under Incremental Budgeting (IB) and MTEF.

Hypotheses 3:

H_0: *There is no significant difference between the mean (average) of subvention received for recurrent expenditure under PLB and MTEF* ($H_0: \mu\bar{a}_1 - \mu\bar{a}_2 = 0$)

H_1: *There is a significant difference between the mean (average) of subvention received for recurrent expenditure under PLB and MTEF* ($H_1: \mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for recurrent expenditure under PLB and MTEF respectively.

Table 4.7: Subvention Release for Recurrent under PLB and MTEF

PLB			MTEF		
Year	Release (¢ b)	Variance	Year	Release (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1998	1.94	0.87	2000	5.64	36.24
1999	3.81	0.87	2001	8.96	7.29
-	-	-	2002	14.38	7.39
-	-	-	2003	17.65	35.88
Σ	5.75	1.75	Σ	46.63	86.80
$\bar{a}_1 = 2.88$			$\bar{a}_2 = 11.66$		
$\sigma_1 = \sqrt{1.75} = 1.32$			$\sigma_2 = \sqrt{86.8} = 9.32$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

Table 4.7 presents data used to test this hypothesis. The t value calculated from the Table is 1.85, and the critical theoretical t-value yields 2.365 from the t distribution table. Given this information, the null hypothesis is accepted.

Hypotheses 4:

H_0: There is no significant difference between the mean (average) of government allocation for capital expenditure under IB and PLB (H_0: $\mu\bar{a}_1 - \mu\bar{a}_2 = 0$)

H_1: There is a significant difference between the mean (average) of government allocation for capital expenditure under IB and PLB (H_1: $\mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for capital expenditure under IB and PLB respectively.

Table 4.8: Government Allocation for Capital Expenditure under Incremental Budgeting and PLB

Incremental Budgeting			PLB		
Year	Allocation (¢ b)	Variance	Year	Allocation (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1994	1.22	0.35	1998	3.08	0.45
1995	1.52	0.08	1999	4.42	0.45
1996	2.11	0.09	-	-	-
1997	2.38	0.33	-	-	-
Σ	7.23	0.85	Σ	7.50	0.90
$\bar{a}_1 = 1.81$			$\bar{a}_2 = 3.75$		
$\sigma_1 = \sqrt{0.85} = 0.92$			$\sigma_2 = \sqrt{0.90} = 0.95$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

The t value calculated from the data in Table 4.8 is 2.38 and the critical theoretical t-value from the t distribution is 2.571. Based on this the null hypothesis is accepted.

Hypotheses 5:

H_0: *There is no significant difference between the mean (average) of government allocation for capital expenditure under IB and MTEF (H_0: $\mu\bar{a}_1 - \mu\bar{a}_2 = 0$)*

H_1: *There is a significant difference between the mean (average) of government allocation for capital expenditure under IB and MTEF (H_1: $\mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)*

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for capital expenditure under IB and MTEF respectively.

Table 4.9: Government Allocation for Capital Expenditure under Incremental Budgeting and MTEF

Incremental Budgeting			MTEF		
Year	Allocation (¢ b)	Variance	Year	Allocation (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1994	1.22	0.35	2000	5.36	24.30
1995	1.52	0.08	2001	6.67	13.10
1996	2.11	0.09	2002	8.57	2.96
1997	2.38	0.33	2003	20.56	105.47
Σ	7.23	0.85	Σ	41.16	145.84
$\bar{a}_1 = 1.81$			$\bar{a}_2 = 10.29$		
$\sigma_1 = \sqrt{0.85} = 0.92$			$\sigma_2 = \sqrt{145.84} = 12.08$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

From Table 4.9 the t value is calculated to be 1.4. The critical theoretical t-value form the t distribution table is 2.365. This means the null hypothesis is accepted.

Hypotheses 6:

H_0: *There is no significant difference between the mean (average) of government allocation for capital expenditure under PLB and MTEF (H_0: $\mu\bar{a}_1 - \mu\bar{a}_2 = 0$)*

H_1: *There is a significant difference between the mean (average) of government allocation for capital expenditure under PLB and MTEF (H_1: $\mu\bar{a}_1 - \mu\bar{a}_2 \neq 0$)*

Where $\mu\bar{a}_1$, $\mu\bar{a}_2$ are mean (averages) of actual release for capital expenditure under PLB and MTEF respectively.

Table 4.10: Government Allocation for Capital Expenditure under PLB and MTEF

PLB			MTEF		
Year	Allocation (¢ b)	Variance	Year	Allocation (¢ b)	Variance
	a_1	$(a_1 - \bar{a}_1)^2$		a_2	$(a_2 - \bar{a}_2)^2$
1998	3.08	0.45	2000	5.36	24.30
1999	4.42	0.45	2001	6.67	13.10
-	-	-	2002	8.57	2.96
-	-	-	2003	20.56	105.47
Σ	7.50	0.90	Σ	41.16	145.84
$\bar{a}_1 = 3.75$			$\bar{a}_2 = 10.29$		
$\sigma_1 = \sqrt{0.90} = 0.95$			$\sigma_2 = \sqrt{145.84} = 12.08$		

Source: Extracts from UDS annual Budget Estimates and Annual Audited Accounts. Variances, Standard deviation (σ) and covariance are author's own calculations.

The data in Table 4.10 gives a calculated t value of 1.08. Reading from the t distribution Table, a critical theoretical t-value of 2.571 is obtained. Therefore the null hypothesis is accepted.

Hypotheses 7

H_0: All the means (averages) of government subvention for recurrent expenditure under IB, PLB and MTEF are the same

(H_0: $\mu\hat{a}_1 = \mu\hat{a}_2 = \mu\hat{a}_3$)

H_1: All the means (averages) of government subvention for recurrent expenditure under IB, PLB and MTEF are not the same

(H_1: $\mu\hat{a}_1 \neq \mu\hat{a}_2 \neq \mu\hat{a}_3$)

Where $\mu\hat{a}_1$, $\mu\hat{a}_2$ and $\mu\hat{a}_3$ are mean (averages) of actual release for recurrent expenditure under IB, PLB and MTEF respectively.

Table 4.11: Mean and Grand Mean of Actual Releases for Recurrent Expenditure

Method	Releases (¢billions)				Mean
IB	0.46	0.47	1.02	1.61	0.89
PLB	1.94	3.81			2.88
MTEF	5.64	8.96	14.38	17.65	11.66
Grand mean					5.14

From the data in Table 4.11, an ANOVA table is constructed as shown in Table 4.12.

Table 4.12: ANOVA of the difference among the three methods of budgeting on their level of actual subvention releases for recurrent expenditure – 1994 to 2003

Source of variation	Degree of Freedom	Sum of Squares	Mean of Sum of Squares	F*	$F_{0.05}$ 2,9	$F_{0.01}$ 2,9
Between group	3-1 = 2	250	250/2 = 125	125/10 = 12.5	4.26	8.02
Within group	3(4-1) = 9	90	90/9 = 10			
Total	(4x3)-1=11	340				

As shown Table 4.12, a one-way ANOVA (for recurrent expenditure) yielded F* value of 12.5. In contrast (and at 95% and 99% confidence levels) $F_{0.05}$ 2,9 and $F_{0.01}$ 2,9 give F value of 4.26 and 8.02 respectively. Since F* is greater than the value of F at 95% and 99% confidence level, the null hypotheses is rejected.

Hypotheses 8

H_0: All the means (averages) of government allocation for capital expenditure under IB, PLB and MTEF are the same

(H_0: $\mu\bar{a}_1 = \mu\bar{a}_2 = \mu\bar{a}_3$)

H_1: All the means (averages) of government allocation for capital expenditure under IB, PLB and MTEF are not the same

(H_1: $\mu\bar{a}_1 \neq \mu\bar{a}_2 \neq \mu\bar{a}_3$)

Where $\mu\hat{a}_1$, $\mu\hat{a}_2$ and $\mu\hat{a}_3$ are mean (averages) of actual release for capital expenditure under IB, PLB and MTEF respectively.

Table 4.13: Mean and Grand Mean of Actual Releases for Capital Expenditure

Method	Releases (¢billions)				Mean
IB	1.22	1.52	2.11	2.38	1.81
PLB	3.08	4.42			3.75
MTEF	5.36	6.67	8.57	20.56	10.29
Grand mean					5.28

The data in Table 4.13 is used to construct a one-way ANOVA table as shown in Table 4.14. The Table shows that at 95% confidence F* is greater than F value. On this bases the null hypotheses is rejected. However, at 99% confidence level F* is less than F value of 4.26. In this regard the null hypotheses is accepted.

Table 4.14: ANOVA of the difference among the three methods of budgeting on their level of actual allocation for UDS capital expenditure – 1994 to 2003

Source of variation	Degree of Freedom	Sum of Squares	Mean of Sum of Squares	F*	$F_{0.05}$ 2,9	$F_{0.01}$ 2,9
Between group	3-1 = 2	152	125/2 = 76	76/16 = 4.75	4.26	8.02
Within group	3(4-1) = 9	148	148/9 = 16			
Total	(4x3)-1=11	300				

4.6. DISCUSSION OF RESULTS

The test results for all the hypotheses indicate that there is no significant difference between the mean (averages) of subvention received for recurrent expenditure under the different budgeting techniques. Similarly, and for capital expenditure, there is no significant difference between the mean (averages) of government allocation for capital expenditure under any of the budgeting methods. The results from the ANOVA confirm this. It can therefore be reasonably concluded that the method of budgeting used does not influence government decision to release funds for the university. The study found that the National Council for Tertiary Education (NCTE) determines how much funds to be released to the university based on the criteria shown in Box 4.

Box 4: Criteria for allocation of funds by NCTE

The criteria for fund allocation are:

- Student numbers
- Cost of training student
- How much funds are available from government
- Equalising factor for deprived institution - UDS.
- Personnel emoluments are based on audited payroll

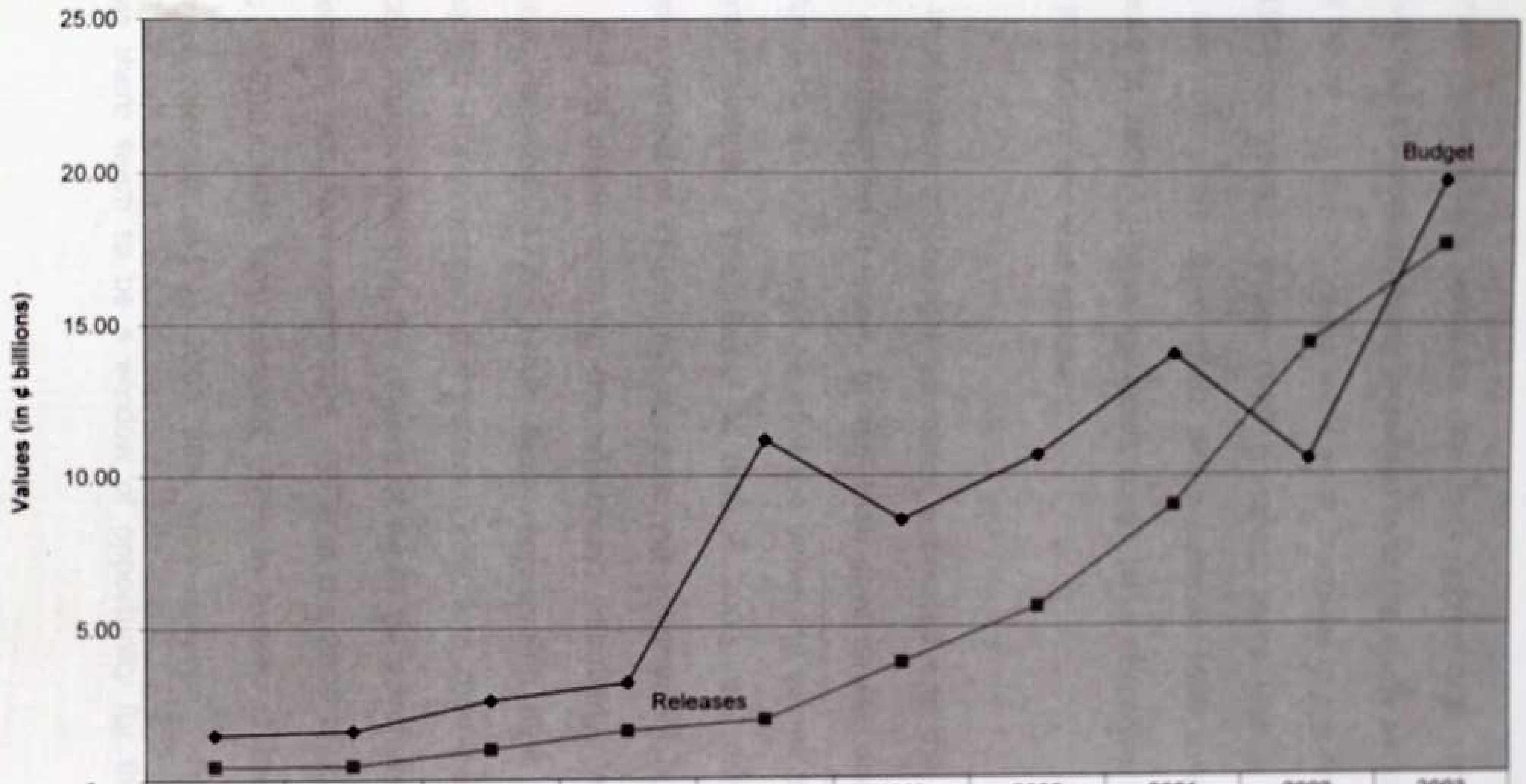
(An informal discussion with the Executive Secretary, NCTE, March 2005)

Recurrent Expenditure Budget

The study has shown that the university's recurrent budget has grown from ¢1.5 billion cedis to ¢20 billion cedis over the ten year period. However, the growth was erratic and inconsistent as shown in Figure 4.1. The 1998 budget estimates of ¢11.17 billion cedis represents about 250% increase over the 1997 estimates level of ¢3.20 billion. Such unprecedented increase could be a sign of lack of understanding of the new budgeting technique (PLB) that was introduced in 1998. In 1999 there was a drop in the university's annual estimates from ¢11.17 billion cedis in 1998 to ¢8.50 billion cedis in 1999. In the subsequent two years, there were increases in the budget estimates over the 1999 level: ¢10.64 billion cedis in 2000 and ¢14 billion cedis in 2001. Then in 2002, the annual estimates dropped from ¢14.00 billion cedis in 2001 to ¢10.50 billion cedis.

In 2003, the recurrent budget estimates was almost double that of 2002 (¢10.9 billion cedis in 2002 compared with ¢19.74 billion cedis in 2003). These inconsistencies might have affected NCTE and for that matter government confidence in the UDS budgets and consequently affected, negatively, government's propensity to release funds to the university.

Table 4.1: Trend in UDS Recorrent Budget Estimates and Actual Releases - 1994 - 2003



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Budget	1.50	1.63	2.62	3.20	11.17	8.50	10.64	14.00	10.50	19.74
Release	0.46	0.47	1.02	1.61	1.94	3.81	5.64	8.96	14.38	17.65

Year

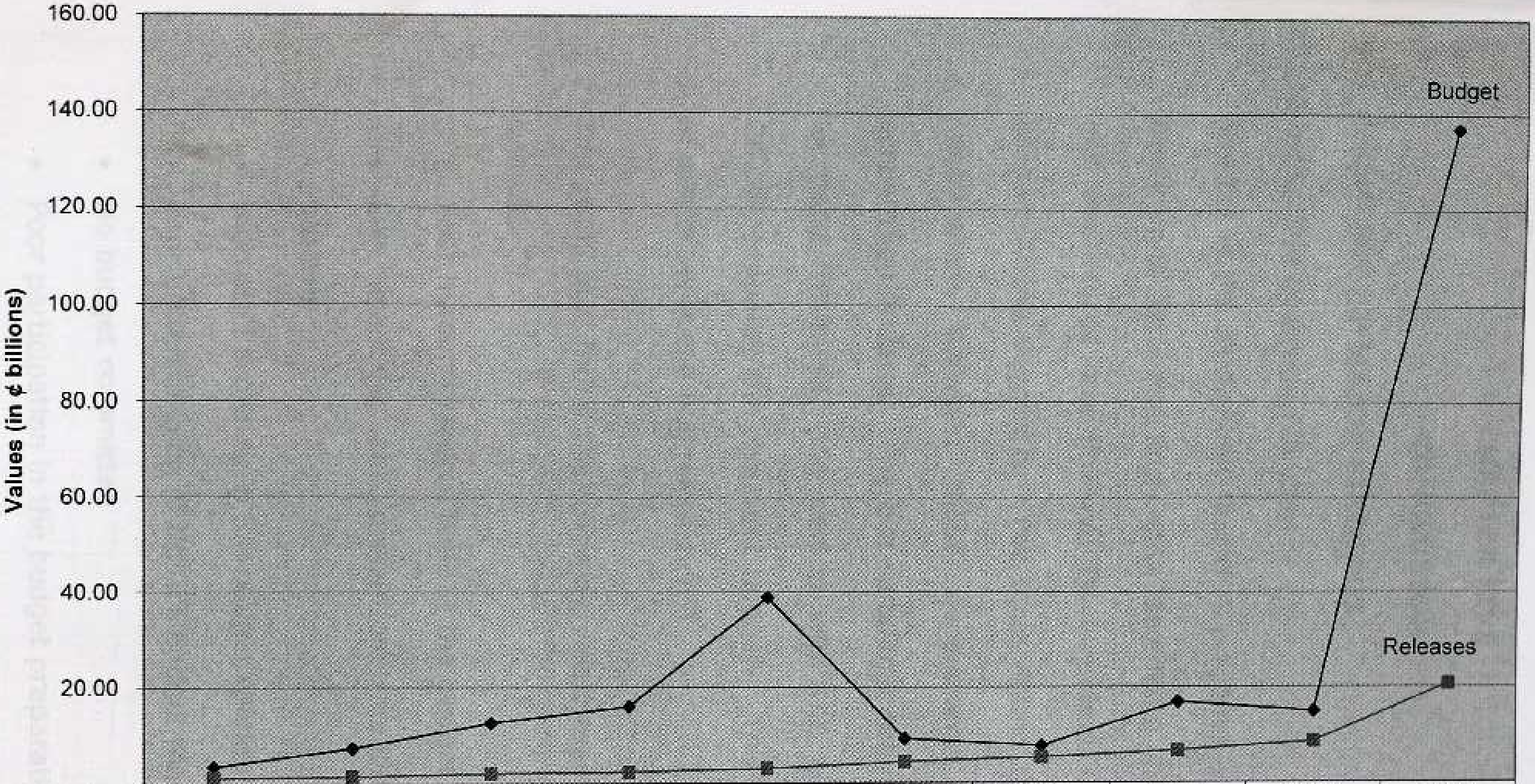
In contrast government releases for the university's recurrent expenditure has consistently been increased over the study period. As shown in figure 4.2 the increases were quite marginal in the first five years (1994 to 1998). From 1999 onwards, there was a sharp increase over the years: from ¢3.81 billion cedis in 1999 to ¢17.65 billion cedis in 2003. These increases could be a response to the increase in student and staff numbers.

Reading in between the budget estimates submitted and the actual releases of subvention it seem to me that government does not release funds to the UDS based on what the university submit by way of recurrent budget. The reason is that in 2002, the university submitted a budget of ¢10.50 billion cedis, yet government however released ¢14.38 billion cedis to the university. Similarly, in 2003 government released ¢17.65 billion cedis representing 89% of the year's request. It also appears that between 2000 and 2003 there was a significant improvement in the release of funds by government for the university's recurrent expenditure. 53% of the 2000 budget was released; in 2001 64% was released; 37% in excess of the 2002 budget was released and in 2003 88% was released. From all indications there seem to be a window of opportunity for the UDS because the trend in the recurrent subvention indicates government willingness for continuous funding.

Capital Expenditure Budget

Similar to the recurrent budget, the capital expenditure budget has some traces of inconsistencies over the study period (See Figure 4.2). For instance in 1998 the capital budget (¢38.82 billion cedis) was more than double the preceding year's (1997) budget which was ¢16.06 billion cedis. The university was in its fifth year in 1998 and the sharp increase in the capital expenditure budget could be due to expansion works, vehicular and equipment acquisitions were earmarked for that particular year. However there was a decline in subsequent two years: ¢9.24 billion cedis in 1999; and ¢7.72 billion cedis in 2000.

As shown in Figure 4.2 government was consistent with the release of funds for the university's capital expenditure. The trend is indicative of government willingness to support capital projects of the university.



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Budget	3.52	7.39	12.60	16.06	38.82	9.24	7.72	16.83	14.93	137.00
Release	1.22	1.52	2.11	2.38	3.08	4.42	5.36	6.67	8.57	20.56

Year

CHAPTER FIVE

CONCLUSION

5.1 SUMMARY OF MAJOR FINDINGS

1) Ineffective Budgeting System

   Results of the study show that UDS prepares a composite budget made up of recurrent and capital segments. The Finance Office and the Works and Physical Development Office respectively prepare these segments. The study found that there is weak coordination between these departments in the budget preparation process. There is no budget committee in place and in many instances, one person with the aid of the Finance Officer, prepares the recurrent budget. This is a manifestation of weakness in the budget section.

2) The study also found the following weaknesses in the budgeting system.

   - Poor human resource base of the budget section
   - Low academic and professional qualification of budget officers
   - High staff turnover in the budget section
   - Poor understanding of NCTE's budget manual
   - No budget committee
   - Poor participation in the budget preparation

- Lack of budget manual
- Inconsistencies in budget estimates
- Inadequate time allowed for the budget preparation
- Secondary status of the budget section

3) Funding for the university was not encouraging, especially in its early years. The study showed that the university suffered unfavourable budget variances through the study period, with the exception of 2002 when a favourable variance was achieved. Further the results of the hypothesis testing showed that the method of budgeting used does not influence government decision to release funds for the university. Instead the NCTE uses certain norms for allocating funds to the public universities. The norms are:

    - Student numbers
    - Cost of training student
    - How much funds are available from government
    - Equalising factor for deprived institution – UDS.
    - Personnel emoluments are based on audited payroll

5.2 RECOMMENDATIONS OF THE STUDY

As a sequel to the study of the budgeting system of the UDS and based on the preceding analyses and findings the following recommendations are made.

Specific Recommendations

1. Improving the Budgeting System

   The university administration should as a matter of urgency establish and empower a budget committee to oversee the budget preparation. The committee should be adequately trained on public sector budgeting and accorded with the necessary authority to operate. The budget committee should in turn draw up a budget calendar for the university. The calendar should spell out when each budget activity will take place and who is responsible. This would eliminate ad hoc approach to the university budgeting procedures. The committee should also prepare a budget manual, which provides guidelines for those who prepares the budget on one hand and those who provide inputs on the other. The Participative budgeting approach should be used where Deans, HODs and sectional heads should be involved in the budget preparation.

They should also be given the necessary training to enable them make meaningful input to the budget.

Efforts should be made by the budget committee to avoid rush in the budget preparation. To a large extent this can be achieved by giving enough time to input providers to submit their entries. The Finance Committee of the university should also be given ample time to study the budget for omissions and additions to be addressed before it is submitted to the NCTE. This will drastically reduce inconsistencies in budget estimates.

2. Reducing the Weaknesses in the Budgeting Function

The human resource base of the budget section should be improved. It should be adequately staffed and given the necessary training (especially on NCTE's budget manual and MTEF processes) and logistics to operate. The staff should also be encouraged to develop their academic and professional qualification. This can be achieved through the UCC's distance-learning programme. Efforts should also be made to reduce the effects of the high staff turnover in the budget section. This can be achieved by means of a good succession plan been put in place.

3. Improving Government Funding and Reducing the Budget Variance

The annual budget variance the university suffers can be reduced if the university administration embarks on the following strategies:

i. Build confidence and reliability in the budget through the removal of inconsistencies and errors in the budget.

ii. The annual budget estimates should be policy driven. Every item of expenditure should support a specified policy of the university. This can best be achieved through a comprehensive and workable strategic plan.

iii. The university can also lobby to improve upon the government fund releases to the university. This should not be confused with bribery. One of the factors that NCTE uses in the allocation of funds is the equalising factor, which UDS is a beneficiary. The university can lobby for an increase in this special facility.

iv. According to the NCTE, fund allocations are based on student population. The university should focus attention in this area by expanding its intake. But improved teaching and learning facilities, such as lecture rooms, libraries, laboratories, clinics, etc, should accompany this.

v. The university can also build into its budget a large budget slack to improve upon its subvention from government.

General Recommendations

1. The study found that the student enrolment has increased dramatically between 2001 and 2003. With just 749 students in 2000, the total student population rose to 2,889 in 2003. This represents almost 260% increase in student population. This achievement is attributable to the non-residential and the "girl-friend" admission policies the university embarked upon in recent years. This policy should continue.

2. The university is also disadvantaged on the grounds of distance. Intra faculty commuting and travelling to and from the national capital has not only become a characteristic of the university's officials, but also involve a lot of money. This expenditure can drastically be reduced if the university further develops it ICT project to connect all campuses via Local Area Network (LAN).

3. Performance evaluation through budgeting is almost nonexistent. Faculties and departments are not given budgetary targets, as such their expenditures are not planned. Introduction of a vote system under which responsibility centres (i.e. faculties and departments) are allocated funds from the government subvention can help achieve this.

4. The study identified problems, which are peculiar to the UDS. The university started without seed money in dilapidated structures. It suffered and continues to suffer inadequacies in resources such as
    - Teaching and research laboratories and lecture halls
    - Laboratory equipment and consumables
    - Library facilities
    - Hostel facilities for students
    - Farm implements
    - Communication links between Tamale and the various campuses.
    - Vehicles

- Understaffing

Further, the university can lobby Parliament for concessionary funds, to compensate the UDS for starting operations without seed money.

The information system of the university should be reengineered with the aim of eliminating bottlenecks in the information gathering information process. This will enhance an effective budgeting within the UDS.

5.3 LIMITATIONS OF THE STUDY

This study has the following limitations:

The study period ends in December 2003. However, between 2004 and the first half of 2005, a lot of activities took place. This may render some of my recommendations superfluous. For instance, Internet connectivity has started in the University with the view of connecting all the faculties. TALIF (Teaching and Learning Innovation Fund) has also been introduced during the period. There is a special window (under TALIF) for the UDS which make available a lot of funding for the University. Several projects (including MIS, Video Conferencing, etc) are currently being funded by TALIF. This programme also has a lot of training packages for staff of the

University. However, to win funding for any TALIF project (both small and regular ones) detailed budgeting is required.

There was difficulty in obtaining information. Most of the budget reports were filled away and could not be traced easily.

5.4 CONCLUDING NOTE

The study was designed to evaluate the budgeting system of the UDS. It identified the weaknesses in the budgeting system and reasons for budget variances. The method(s) of budgeting was reviewed with the aim of determining whether the technique of budgeting can influence government decision to release funds to the university.

The Descriptive approach was used drawing information mainly from secondary sources supplementing it with primary data. Variances were computed and the student t-test was used to analyse data.

Several findings emerged from the study. The current budgeting system is embedded with many weaknesses. The annual budget estimates of the university have been erratic and inconsistent. In contrast, government releases to the university show a consistent upward trend. This shows government willingness to fund the UDS. It also creates a window of opportunity for the university administration to further explore this interest for improved funding for the university. It was also clear from the data analysed that there was a positive correlation between the university's estimates and government releases. This means that the higher the annual estimates, the more funds government released.

The absence of budget committee in the university has resulted in poor coordination and less participation in the process of budgeting. The study established that the method of budgeting used by the UDS does not influence government decision to release funds for the university. Instead the NCTE (a supervisory body of the public universities) is guided by certain criteria in the allocation of funds to the universities.

The study is of the view that to address the weaknesses in the budgeting system only at the level Finance Office will lead to palliative solution. Consequently, the above recommendations are presented for consideration by the university's Finance Committee.

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Appendix: Details of Student Enrolment 1993 -2003

Year	FOA		FIDS		FAS		SMHS		Total Enrolment	Cum Total
	Enrolment	Cum FOA	Enrolment	Cum FIDS	Enrolment	Cum FAS	Enrolment	Cum SMHS		
	a	b	c	d	e	f	g	h	i = a+c+e+g	j = b+d+f+h
1993	40	40	0	0	0	0	0	0	40	40
1994	40	80	59	59	0	0	0	0	99	139
1995	20	100	17	76	0	0	0	0	37	176
1996	46	146	36	112	0	0	23	23	105	281
1997	74	180	63	175	0	0	32	55	169	410
1998	87	227	72	188	0	0	50	105	209	520
1999	81	288	58	229	0	0	19	124	158	641
2000	102	344	65	258	0	0	23	147	190	749
2001	193	463	175	370	0	0	65	212	433	1045
2002	335	711	450	748	148	148	92	304	1025	1911
2003	307	937	560	1250	189	337	84	365	1140	2889

1. 641+190-105+23 = 749
2. 749+433-169+32 = 1045
3. 1045+1025-209+50 = 1911
4. 1911+1140-158-23+19 = 2889

Sources: 1Extracted form Vice-Chancellor's Report, Third congregation, UDS P 76. Cumulative figures are author's calculations
2 Extracted form Vice-Chancellor's Report, Fourth congregation, UDS P 87. Cumulative figures are author's calculation