Montemorelos University

Faculty of Business and Legal Sciences

PREDICTIVE MODELLING OF THE FACTORS IMPACTING ON BUDGETARY CONTROL IN INSTITUTIONS OF HIGHER LEARNING

Thesis
presented in partial fulfilment
of the requirements for the degree
Doctorate in Business Administration

by

Prakash Ramoutar

April 2019

ABSTRACT

PREDICTIVE MODELLING OF THE FACTORS IMPACTING ON BUDGETARY CONTROL IN INSTITUTIONS OF HIGHER LEARNING

by

Prakash Ramoutar

Main advisor: Ronny Kountur

DOCTORAL THESIS ABSTRACT

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Title: PREDICTIVE MODELLING OF THE FACTORS IMPACTING ON BUDGETARY CONTROL IN INSTITUTIONS OF HIGHER LEARNING

Researcher's name: Prakash Ramoutar

Name and degree of main advisor: Ronny Kountur, PhD Philosophy and PhD in Educational Research and Evaluation

Date completed: April 2019

Problem

The empirical model in which budgetary slack, budgetary participation, management perception and organizational performance are predictors of budgetary control, as perceived by institutions of higher learning.

Methodology

The research was empirical quantitative, descriptive, exploratory, explanatory and transversal. The study population was made up of 193 institutions throughout the Caribbean. An instrument was administered and 101 institutions from the population described. The substantive statistical process was based on regression analysis, performed in SPSS 20.0.

The constructs for the five instruments used were done through factorial analysis techniques (with explained variance levels of over 64%, which are acceptable) and the reliability, measured with the Cronbach alpha coefficient for each instrument, was acceptable (with the lowest explained variance levels of .671). For the analysis of this hypothesis, the statistical technique of multiple linear regression was used.

Results

The model was validated with the sample of institutions of higher learning identified above. The budgetary slack and operational performance are good pre-dictators of budgetary control, according to the perception of senior officials in institutions of higher learning in the Caribbean. When evaluating the influence of independent constructs through the standardized beta coefficients, it was found that the best predictor is the budgetary slack, followed by operational performance, but the prediction of budget participation and management perception did not have a meaningful result.

Conclusion

It is recommended to the management of institutions of higher learning in the Caribbean, to pay attention to the budgetary slack that is created in the budget setting process to ensure that it is acceptable to the institution, that institutions review income targets to ensure that income figures are not easily attained. That focus should be placed on organizational performance and budgetary slack since, since they are activities that directly impact on budgetary control. It is also important to evaluate departmental activities, to ensure that efficiency is considered as the ultimate goal and this

may require some financing. The construct management perception and budget participation are not good predictors of budgetary control.

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Tesis
presentada en cumplimiento parcial
de los requisitos para el título de
Doctorado en Administración
de Negocios

por

Prakash Ramoutar

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DEDICATION

This work is dedicated to all Ramoutar and Seunarine family members, who will follow along this doctoral path in scholarship. I have persisted as the first with the hope that our future will be brighter.

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ACKNOWLEDGEMENTS

It is with a sense of fulfilment through God's grace that I admit that this doctoral journey has been challenging, rigorous, and extremely rewarding. It has proven to be a value added life experience for which I am grateful. The completion of this body of work was made possible with the help and encouragement of many individuals along the way.

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Special thanks to my research supervisor, Dr. Ronny Kountur, for your guidance. You have been the right fit for me! Supporting professors, Dr. Karla Saraí Basurto Gutiérrez, Dr. Omar Arodi Flores Laguna and Dr. Stephen Pilgrim have been great sources of support, both providing motivation and feedback as I navigated through the process of the research. I also owe a debt of gratitude to Dr. Pedro Gonzales and the administration at Montemorelos University, who were quite welcoming to us and made sure that we were well taken care of while in Mexico. In addition, I must show appreciation to all administrators of the North Eastern Conference for their hospitality.

To my USC family, especially my fellow administrators who supported me in this

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CHAPTER I

INTRODUCTION

Background of the Study

In the sections that follow in this chapter, an introduction and a brief compilation of definitions of the latent variables of this research will be presented, such as: (a) budgetary control, (b) budgetary slack, (c) budget participation, (d) management perception and (e) organizational performance. Additionally, the study's guiding research questions and an introduction to the model that justifies the relevance and the direction for the research, along with the contextual information that will be shared will serve the purpose of introducing and supporting the study's design.

Across the world, it can be observed how higher education plays a defining role in the development of societies. Also known as tertiary education institutions, they are commonly expected to take the lead on agenda related to resulting economic growth of the society by producing an array of professionals such as scientists, engineers, physicians, lawyers, scholars and business executives, among others. According to Anim and Mensah (2015), "the ability of the nation to achieve economic, social, cultural and political developments depends largely on the quality of tertiary education vis-à-vis the quality of students and/or graduates from the universities and other tertiary institutions" (p. 26). For this reason, among others, higher education institutions should be considered a part of service industry since the primary focus of tertiary institutions is to

provide quality learning experiences to students.

Oldfield and Baron (2000) pointed out that higher education is regarded as a "pure" service and for Hennig-Thurau, Langer and Hansen (2001), educational services "fall into the field of services marketing" (p. 33). Though colleges and universities had initially been established to simply provide a service, increasingly in today's society these institutions of higher learning are realising their worth as businesses. There is contention that placing emphasis on a business model threatens the institution's academic excellence (Carlson & Fleisher, 2002) but more popularly, many have been striking the appropriate a balance (Lapovsky, 2013). In addition to adhering to their desire to meet or even exceed the needs of their students, they are also beginning to focus more on profitability (Rondo-Brovetto, 2011; Ross, Grace, & Shao, 2013). This development is especially true for countries with a tuition-based model (DeShields Jr., Kara, & Kaynak, 2005).

While the goal of institutions of higher learning is as a service provider to empower students to live quality lives through education, there is no doubt that, they function as businesses (Yuan & Powell, 2013). Given the tough economic times that organizations worldwide are facing, it is prudent for managers of any type of business to review spending and implement measures to reduce expenditure and increase efficiency (Johansson & Siverbo, 2014; Van der Stede, 2001). It can be deemed critical for both public and private sector institutions to meet their own financial targets, since they too are expected to meet their financial obligations to others in a timely manner. The financial health of businesses ensures their viability and sustainability.

An article published in The Chronicle of Higher Education by Quintana and Hatch

(2017) indicated that in the United States of America, several colleges have had to close and 177 colleges that grant degrees failed a United States Education Department test for financial responsibility in the 2014-15 academic year. Similarly, in Europe the same challenge exists. Financial sustainability has been recognized as one of the key challenges facing Europe's universities by Estermann and Pruvot (2011) in an article published in University World News. Likewise, higher education systems across Asia have faced overarching challenges such as maintaining and improving education quality even in the face of serious financial constraints, increasing and better utilizing the financial resources available to them (Asian Development Bank, 2011). In the Caribbean region also, Downes (2013) noted that financing the operations of a regional university is also a challenge. These evidences suggest that there is a need for attention to be given to improving the financial state of institutions of higher education.

Budgets are most popularly used to manage finances. Drury (2006) defined a budget as a plan expressed in quantitative, usually monetary, terms and covering a specific period of time. This systematic plan for utilization of manpower and material resources has long been found to serve organizations well in staying financially afloat. For tertiary education institutions in the Caribbean in particular, where the economies are struggling, they may get very little support from external sources like the government. Therefore, it is even more vital that they create a budget and focus on meeting their budget targets. To do so, they must implement some control (Joshua & Mohammed, 2013). From the perspective of management control systems, budgeting processes are capable of providing businesses with information relevant to their operations and financial standing applicable through coordination, communication, controls,

performance evaluation, and incentives (Anthony, Govindarajan, & Dearden, 2007; Chenhall & Langfield-Smith, 2007).

Budgetary control is an essential factor in determining the survival of an organization in today's dynamic and uncertain environment. Amid the challenges of recent economic crises facing organizations both in the public and private sectors, many institutions worldwide have been forced to pay more attention to their budget settings and targets. Around the world, there are several tertiary education providers who have had to make budgetary reductions which resulted in the reduction of employees and cuts in other expenditures within the institution to ensure that budgetary targets are met. There is also evidence indicating that the failure of some organisations to survive in the global market is due to the mismanagement of their resources (Azaranga, Gonzalez, & Reavill, 1998). Thus, having a proper budgetary control system allows institutions to improve their managerial attitude and performance of the organisations and to ascertain useful information (Brignall & Modell, 2000).

According to Joshua and Mohammed (2013, p. 40), the “absence of effective budgetary control breeds disregard for laid down procedures, loss of focus and shoddy coordination of activities and these are capable of crippling an organization”. Budgetary control is regarded as a systematic and formalised approach for accomplishing the planning, coordination and control responsibilities of management through the use of budgets (Merchant & Van der Stede, 2003). This study has been prompted by the researcher’s first-hand knowledge of the financial constraints experienced at some tertiary education providers that resulted in tight budgetary controls being implemented, along with the closure of several such institutions in the recent past.

Budgetary Control

Budgetary control was found to be a popular concept in the management accounting literature and a widely used strategy in the financial administration of organisations. It can be described as the process of comparing budgeted plans and standards to actual financial results, analysing variances, and taking corrective action (Bedford, 2015). In providing a definition, Dyson (2001) clarified that the concept of budgetary control refers to a system of management control in which actual results for a period are compared with budget for that period. It is in this way that costs are managed.

The Chartered Institute Management Accountants (2005) explained further that budgetary control is the establishment of budgets relating to the responsibilities of executives to the requirements of a policy and the continuous comparison of actual with the budgeted results, either to secure by individual actions the objectives of that policy or to provide a basis for its revision (Charted Institute of Management Accountants, CIMA, 2005). Similarly, Siyanbola (2013) also defined budgetary control as the process of comparing the actual results with the planned results and reporting on the variations called variance. A synthesis of these definitions is summed up by Mohamed, Evans, and Tirimba (2015). The authors purported that the process of budgetary control involves preparation of a budget, recording of actual achievements, ascertaining and investigating the differences between actual and budgeted performance, taking suitable remedial action to keep expenditure within agreed limits, and in exceptional circumstances also revising goals when it is deemed necessary.

Budgetary Slack

Often found in the literature in management accounting is also the term budgetary

slack. Merchant (1985) proposed that budgetary slack is the difference between the amount budgeted for an area and that which is necessary. Similarly, budgetary slack was explained by Kahar, Rohman, and Chariri (2016) as the difference between the real resources needed to complete the work effectively with a number of resources that are added to complete the task. Young (1985) defined the term as the amount by which a subordinate understates his productive capability when given a chance to select a work standard against which his performance will be evaluated. Recent definitions of budgetary slack have also followed this pattern. It was deemed to refer to budget resources controlled by a manager in excess of optimal to accomplish his or her objectives by Kren (2003). This meant that excess over the required resources were built by managers into a budget by underestimating revenues, overestimating costs or underestimating performance capabilities in order to make a budget target more easily achievable.

Budget Participation

Definitions for budget participation are concerned with the extent to which those concerned within the organization partake in preparing the budget and guide the budget goals (Kenis, 1979; Noor, Haryanti, & Othman, 2012; J. F. Shields & Shields, 1998). Numerous studies also defined budget participation as allowing subordinates to exchange information with supervisors to influence their budget target (Lau & Lim, 2002), to seek information for task completion (Brownell & Hirst, 1986), and to ensure budget adequacy (Nouri & Parker, 1998). Participation means that there is input from the stakeholders directly involved in the process. Lower level managers do this through their budget estimations, which they then voice to the top-level management.

Management Perception

Perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world (Lindsay & Norman, 2013). People do what they perceive will serve their values. This means that there is always a time gap between the brain's consideration of a behaviour and the behaviour itself, therefore, the processing that takes place in this time period, it is what can be referred to as perception (Otara, 2011). Lu (2011) pointed out that budgetary perception refers to an administrator's general attitude, enthusiasm and rational toward the budgeting practise. This will, in many cases, be influenced by the value administrators place on the budget and their own experiences of it being valuable in realizing success. Keeton and Mengistu (1992) supports the need for organizations to analyse varying perceptions.

Organizational Performance

Definitions included that organizational performance refers to how well the company is doing relative to other companies as perceived by budget supervisors (Van der Stede, 2000). Organisational performance could also be defined as the ability to reach a desired objective or the degree to which anticipated results are achieved (Tangen, 2005). The concept of organization performance is based upon the idea that an organization is the voluntary association of productive assets, encompassing capital, human and resources; for the purpose of achieving a shared purpose (Barney, 2002). Halachmi (2005) stated that researchers have emphasised that understanding organisational performance can help to distinguish techniques for improvement. Financial and nonfinancial indicators should be taken into consideration because they offer information on the degree of achievement of objectives and results (Lebas & Euske, 2006).

Definition of Terms

In this section, the definitions of some of the key terms used in this study will be shared. The following terms were operationalized in this research:

Budget: is a quantified plan in monetary terms that has a full and coordinated systematic plan for the utilization of manpower and material resources and acts as a measurement tool for control.

Budgeting: is the process that an organisation goes through in order to create the final organisational budget that it would implement over a period.

Budgetary control: is the process of comparing budgeted plans and standards to actual financial results, analysing variances, and taking corrective action (Bedford, 2015).

Fidelity: is the extent to which an enacted budgetary control is consistent with the intended budgetary control (Century, Rudnick, & Freeman, 2010).

Budgetary slack: is defined as the amount by which a deliberate incorporation of excess resources in the budget was included that makes the budget easier to attain.

Budget participation: is defined as a process in which the budget holder is involved in the preparation of their budget and some of their recommendations are included in the final approved budget.

Management perception: is defined as the general attitude that management has in relation to budgetary control.

Organizational performance: is defined as the performance of an organization relative to other organizations based on its financial performance.

Problem Statement

The literature provides evidence that finances in organizations, especially

tertiary education institutions, is a current problem in the field (Ade-Ajayi, 2001). This affects the financial viability of the institutions and this impact on the likelihood of their future operations is worrying for those stakeholders involved. Internal control measures are most frequently taken to protect the organization's resources against waste, fraud, and inefficiency; ensure accuracy and reliability in accounting and operating data; secure compliance with the policies of the organization; and evaluate the level of performance.

Most popularly, businesses have been found to use control of their budgets to optimize their financial resources. Tertiary education providers in particular, also do the same. There has been much research done in relation to the impact of budgetary control on financial performance of tertiary education institutions and other public and private businesses (Makamanzi, 2016; Qi, 2010; Siyanbola, 2013). Van der Stede (2001), who is considered as a pioneer in the field of budgetary control, proposed a measurement for budgetary control that aids in identifying if it exists in an organization. However, most of the research conducted by him and by other researchers following in his path have all looked at the presence of budgetary control and its impact on other variables such as organizational performance, effectiveness, and employee behaviours such as organizational commitment, motivation and stress (Conboy; 2008; Dahlan, Auzair, & Wan Ibrahim, 2007; Hemsing & Baker, 2013; Jia, 2007).

Yet, it remains unclear from the literature as to what variables affect an organization's decision and ability to use budgetary control with fidelity. The literature is replete with studies which demonstrate relationships where budgetary control makes an impact yet few studies exist that allude to what impacts on budgetary control. As such,

this study attempts to fill this gap in knowledge in order to provide a better understanding of what affects budgetary control.

Proposed Model

It was discovered during the review of the relevant literature, that the following factors may have an impact on budgetary control in organizations. They are depicted in the hypothesized model shown in the diagram in Figure 1. The researcher theorizes that there are four variables namely: budgetary slack; management perception; budget participation; and organizational performance, which all impact on the fidelity of the budgetary control measure which is often implemented as an internal control measure to assist in the management of finances in an organization during tough financial times.

In this model, the dependent variables are budgetary slack, budget participation, management perception and organizational performance while the independent variable is budgetary control.

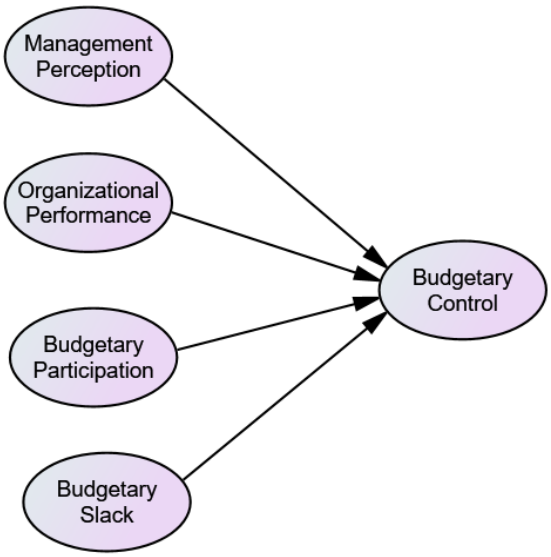

Figure 1. Model of factors affecting budgetary control.

Research Question

The problem to be investigated in this study is the empirical model in which budgetary slack, management perception, organizational performance and budget participation are a predictor for budgetary control as perceived by senior officers for institutions of higher learning in the Caribbean?

The main purpose of this study is to know the direct effect of the following variables toward Budgetary control (BC): Organizational Performance (OP), Budgetary Slack (BS), Management Perception (MP), and Budget Participation (BP).

Hypothesis

In order to provide statistical evidence and scientifically support to the conclusions, the present study states the following hypotheses:

H_1: Budgetary slack, management perception, organizational performance and budget participation are predictors for budgetary control.

Research Objectives

In accordance with the research aim, the following research objectives were set:

1. Build a questionnaire directed to tertiary education institutions for measuring budgetary slack, management perception, organizational performance, budget participation and budgetary control.

2. Assess the variables involved in the study: budgetary slack, budgetary participation, management perception, organizational performance, and the budgetary control.

3. Explain the direct effects of relevant variables on budgetary control at tertiary education institutions.

4. Evaluate the linear relationships between each of the predictor variables (budgetary slack, budgetary participation, management perception, and organizational performance) and budgetary control.

5. Formulate hypotheses concerning the relationship between the variables and budgetary control from a review of the existing literature.

6. Test hypotheses concerning the relationships between the variables and budgetary control.

7. Explain the direct effects of relevant variables on budgetary control at tertiary education institutions.

Significance of the Study

The literature provides evidence that finances in organizations, especially institutions of higher learning, is a current problem in the field (Adeleye, 2016). This affects the financial viability of the institutions and this impact on the likelihood of their future operations is worrying for those stakeholders involved. Internal control measures are most frequently taken so as to protect the organization's resources against waste, fraud, and inefficiency; ensure accuracy and reliability in accounting and operating data; secure compliance with the policies of the organization; and evaluate the level of performance.

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considered as a pioneer in the field of budgetary control, proposed a measurement for budgetary control that aids in identifying if it exists in an organization. However, most of the research conducted by him and by other researchers following in his path have all looked at the presence of budgetary control and its impact on other variables such as organizational performance, effectiveness, and employee behaviours such as organizational commitment, motivation and stress (Conboy; 2008; Dahlan et al., 2007; Hemsing & Baker, 2013; Jia, 2007).

This research looks at how budgetary slack, budgetary participation, management perception and organizational performance affect budgetary control. Bissessar (2010) highlighted that there are challenges of transformation related to planning and monitoring budgets in the Caribbean. Yet, those with the responsibility for this function remain uncertain as to the factors that truly impact on budgetary control in the region's context. Most of the challenges facing tertiary education providers is related to finances, therefore it is justified that a study is done to look at the factors that affect the mechanism in place meeting the organizational targets.

The findings of this study may lead the researcher and administrators of the institutions under study, to a better understanding of the factors that affect budgetary control. Literature on budgetary control and budgetary slack, budgetary communication, management perceptions is well developed and to a lesser extent organizational performance, budgetary participation and cash flow in relation to how budgetary control impacts them. While it is important to know the impact of budgetary control on an organization it is critical for an organization to know the variables and the impact of those variables have in the institution achieving its budget targets through budgetary

control. It would be help these institutions to better manage their budget so that the organization can be sustainable within its context or goal.

However, there is no literature on how these variables affect budgetary control. This means that the research is required, is original and will add to the dearth research in the area and will hopefully open doors to further study in the field. All institutions will be briefed on the nature of the study, its purpose, and then will be asked to reply and submit the completed questionnaire as consent acknowledging their understanding of the purpose of the study and for their participation in the research.

Limitations

In the development of this research, some relevant constraints are considered as follows:

1. The application of the instrument requires the participation of third parties.

2. Financial constraints and time challenges.

3. The administration of the instrument depended on the time disposition of the senior officers of the institutions.

4. There is variety of cultures in the institutions where the instrument was administered.

Delimitations

Here are some delimitations that was considered relevant in the preparation of this research:

The instruments will be answered by senior officers at the institutions. The research is limited to the 193 tertiary education providers in the Caribbean. The research

was not proposed to resolve the possible difficulties detected.

Assumptions

Below are some assumptions considered in the preparation of this research:

1. It is expected that the participants responsibly answered the instruments and that they had sufficient time to test each instrument.

2. The theoretical basis of relations between constructs is based on authors who know the subject.

3. The research used as the basis of relations between constructs for this research is empirical studies, prepared with scientific rigor and significantly acceptable.

4. It was assumed that the indicators of each instrument were interpreted correctly.

Philosophical Background

In this section of the study, analysis based on the Holy Scriptures and other sources based on the researcher's philosophical view of the constructs of this paper, and how they relate to God the unique Sovereign of the universe, will be shared. Those constructs are budgetary slack, budgetary participation, management perception, organizational performance, and the budgetary control.

In considering how tertiary education institutions view financial management, a biblical worldview shapes our appreciation for how financial managers who might be Christians and who are charged with responsibility for budgetary control are influenced by their biblical ideas and beliefs. According to Hauriasi (2011), the scant attention being paid to internal controls in religious institutions could be attributed mainly to the fact

that their primary purpose is spiritual and social rather than economic. The Bible teaches that "Wisdom is the principal thing; therefore, get wisdom: and with all thy getting get understanding" (Proverbs 4:7, King James Version). This means that God places a high value on education and as such, the "getting" may involve use of money. According to The Pulpit Commentary, no price is too high to be paid for wisdom and no sacrifice is deemed to be too great.

The parables of the hidden treasure and goodly pearl (Matthew 13:44; Luke 10:42), demonstrate instances where a man sold "all that he had" to obtain the prize. Christians view true education as imparting this wisdom. From a Seventh Day Adventist perspective, education is foundational to the mission of the church as Ellen G. White notes that:

> True education means more than the perusal of a certain course of study. It means more than a preparation for the life that now is. It has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental, and the spiritual powers. It prepares the student for the joy of service in this world and for the higher joy of wider service in the world to come. (White, 2000, p.13)

Having regard to what was afore mentioned, some might interpret this to mean that budgetary control pales into insignificance when compared to the imparting of wisdom. Though from a theoretical standpoint this might be true, God never contradicts himself and wants us always to be guided by all of the principles he has outlined from a holistic viewpoint. The fact that God wants us to seek wisdom, which in part is imparted through tertiary education institutions, means that schools as institutions and their viability matter to him.

The variables identified in the literature that are hypothesized as impacting on budgetary control in an institution all relate to leadership practices and people within

the organization.

In the parable of the minas (or pounds), Jesus tells of a nobleman calling ten of his servants and giving them one mina each (about three months' wages), and telling them, "Engage in business until I come" (Luke 19:13).

However, what lessons can we learn from the bible about managers or leaders? Is the principle of delegation and holding others accountable biblical? The simple answer is yes.

In the book of Exodus chapter 18 verses 13-27, Moses' father in law advises him of the power of delegating responsibility as a manager. This was sage advice that made his work much easier. Moses is one of numerous biblical role models in the Holy Scripture. He is a leader who demonstrates lasting leadership qualities. The lesson for us from Moses' life and actions is simply that the leader who has placed himself completely at God's disposal, and is willing to share responsibilities with others, can be seen as rejecting selfish interests, divisions between mine and yours, and devoting himself to the wellbeing of his/her institution. This is who financial managers are called to be.

In communicating about "Why Business Matters to God", Van Duzer (2010) argues that businesses have two intrinsic purposes: first, to provide goods and services and enable communities to flourish; and second, to provide opportunities for meaningful work. The bible, especially the book of Proverbs which imparts wisdom and insight, speaks a great deal about honouring God through our efforts.

In Proverbs 22:29 it says, "Do you see a man diligent and skilful in his business? He will stand before kings; he will not stand before obscure men" (Amplified Version).

In suitable preparation for the future, we are told in Proverbs 13:22, “A good man leaves an inheritance to his children's children ….” (King James Version). These two verses suggest that God’s desire is for our efforts in managing businesses too are to be able to stand in the midst of financial security and repute instead of being in debt and turbulence. God gave a mandate to Christians to lead out in the world when He called them the light of the world (Matthew 5:14-16) as well as promised that they would be the head and not the tail (Deuteronomy 28:13).

Matters relating to money can be viewed from the lens of stewardship. Christian stewardship is essentially a life in response to God for his goodness and love. In general, stewardship refers to holding in trust, using and investing that which belongs to someone else. Psalm 24:1 serves as a launching pad concerning what is God’s: “The earth is the Lord’s, and everything in the world, and all who live in it”. Along with this verse, the Bible offers many illustrations of stewardship. Stewardship requires one to give account of the blessings God has bestowed upon His children. How Christians relate to their blessings is a direct reflection of their relationship with God. Money should be seen as a tool to bring glory and honour to God.

The Bible teaches that truly understanding that all things belong to God, man sees himself as only a steward of his possessions. Finance turns the conditions of human existence into opportunities to bring glory to God, to serve as stewards of creation, and to care for each. Colossians 3:23–24 admonish believers that in “Whatever you do, work heartily, as for the Lord and not for men, knowing that from the Lord you will receive the inheritance as your reward. You are serving the Lord Christ” (King James Version).

Throughout the Bible, important principles for life are given by God, including how to handle money and finances. God's word guides us to believe that budgeting is scriptural. The following pertinent verses of scripture support this belief: "The prudent see danger and take refuge, but the simple keep going and suffer for it" (Proverbs 27:12, New International Version). "In their heart's humans plan their course, but the LORD establishes their steps "(Proverbs 16:9, New International Version) "Be sure you know the condition of your flocks, give careful attention to your herds" (Proverbs 27:23, New International Version).

Wise King Solomon gave principles of sound financial management when he wrote:

Be diligent to know the state of your flocks and attend to your herds; for riches are not forever, nor does a crown endure to all generations. When the hay is removed, and the tender grass shows itself, and the herbs of the mountains are gathered in, the lambs will provide your clothing, and the goats the price of a field; you shall have enough goats' milk for your food, for the food of your household, and the nourishment of your maidservants (Proverbs 27:23-27).

The principle is that of a wise overseer which is God's message communicated to us. It is clear that it may not at all times be easy to prudently use and manage the assets like money and other resources contained in budgets. It will necessitate not only planning, but restraint to remain within the budget. God's word advises that it is a delight unto him when managers can wisely and carefully take care of the resources lent to them as stewards.

The use of budgetary control for tertiary education institutions as a means of

helping them to continue the work of integrating faith and learning and imparting wisdom is not opposed to Biblical principles. Since money and by extension all other resources that an institution has are God's, every spending decision made by the institution are spiritual decisions. This paper, having highlighted that God does take an interest in the wellbeing of the places that we work and the work that we do, serves as proof that the proposed research for determining a conclusive model that predicts when budgetary control might most likely be used in institutions of higher learning, is not opposed to biblical principles.

Organization of the Study

This research is arranged in five chapters. In Chapter I, there has been a presentation of the background of the problem, the relationship between the variables, the investigation to be carried out, the problem statement, the definition of terms, the research hypothesis, the research questions, the objective of the investigation, the justification, the limitations, the delimitations, the assumptions and the philosophical background. The remaining sections of the research paper are structured in sequential chapters.

Next, in Chapter II, a review of pertinent literature which relates to budgetary slack, budgetary participation, management perception, organizational performance, and budgetary control are presented.

Chapter III points out the overall research methodology for the study. This includes the research design used for the data collection, research sampling, data collection techniques, data analysis methods the measurement instrument, the validity, the reliability, the operationalization of the variables, the null hypotheses, the

operationalization of the null hypotheses, the research questions and limitations of the chosen method.

In Chapter IV, the nature of the analysis procedure is described, and the findings are presented in relation to the research hypothesis, the behavior of the variables and the analysis of the main model.

Finally, in Chapter V, a summary of the study is, presented, along with the results, the conclusions, recommendations and paths for future research.

CHAPTER II

LITERATURE REVIEW

Introduction

This chapter is a review of the literature on the variables considered in this study and which were introduced in Chapter I. The purpose of the review is for the researcher to establish the existing literature on the variables in order to identify any existing gaps upon which to base this study and inform the research. This chapter commences by providing some brief definitions of budgets and then seeks to investigate each variable individually. This will be followed by a thorough overview of any existing relationships among the constructs. Included here also will be references made to previous research carried out on the various constructs and the relationships that exist among them.

A combination of database searching, and “snowballing” was used to identify relevant literature in this study. Electronic searches were conducted using search applications such as Google, Google Scholar, Sage Journals, Ebsco Host, Education Resource Information Centre (ERIC), ProQuest databases and Academic Search Complete. The following search terms or combinations of terms were used: budget, budgeting, budgetary control, management perception, organisational performance and budgetary participation. The snowballing technique, which consisted of reading the reference lists of relevant studies that the researcher located in the databases, was particularly effective in locating additional sources that were applicable to the review.

Budgets

A search of the Google Scholar database alone returned approximately 323,000 results relevant to the concept. In consideration of a background for the relevance of the concept, in recent times Kpedor (2012) explained that the primary characteristic of businesses all over the world was setting goals. These goals are broken down into specific objectives for which funds are allocated and intended for their realization. Businesses bare these expenses in hopes that the benefits to their organization outweigh the costs. It is argued that it is necessary to have a mechanism in place to manage spending, provide information on past performance and allow for meaningful comparisons between expected and actual progress (Young, 2003). This is done through setting and monitoring budgets.

Explained from another viewpoint, Drury (2006) referred to the budget as a systematic plan for utilization of manpower and material resources. Although budgets are often stated in terms of money, it was noted that they need not be, as the budget can also relate to quantities made and sold, numbers of employees to be recruited, or weights of material to be consumed. Clarified further, Khin, Yee, and Ismail (2014) elaborated that a budget is an accounting tool that sets the costs and revenue goals for responsibility centres within an organization and also a measurement tool for control, coordination, communication, performance and motivation.

The CIMA (2005), purported that a budget is a plan quantified in monetary terms that is prepared and approved prior to a defined period of time, usually shows planned income to be generated and expenditure to be incurred during that period and the capital to be employed to attack a given objective. Also, Maheshwari (2006) emphasized

that a budget is created based on the money that is available to an organization. Further explained in the literature, the budget has been described as a full and coordinated plan which has always played a key role in managing an institution, both private and public, and which serves as an important control system in many companies (Ekholm & Wallin, 2000, Merchant & Van der Stede, 2003). Moreover, Robinson and Last (2009) highlighted also that a good budget is determined by the level of income of the organization and as such, is not fixed.

There was no significant debate about budgets being an integral part of most organizations and serving a variety of management functions (Sponem & Lambert, 2016). The literature also strongly suggested that budgets are an integral part of any organization and serves to support management functions related to planning and decision-making (Foster, 2017; Sponem & Lambert, 2016). Management uses it for planning, organising, motivating and controlling. Various definitions were present in the literature yet they all portray a similar notion that a budget is an excellent tool for planning and systematic utilization in any organization.

Some have described budgets as a quantifiable form of the business plan designed to implement goals (Samuelsson, Andersen, Ljungkvist, & Jansson, 2016), while others define a budget as a quantifiable manifestation of a proposed plan to facilitate coordination and accomplishment of that plan (Réka, Ştefan, & Daniel, 2014). Karadag (2015) highlighted that failure to use budgets for planning often results in poor financial performance and subsequent business failure. In general, a budget can be defined as a means of communicating expectations through a quantified plan relating to a given period.

Though a bit dated, the simplest description of budget planning was given by Stoffle (1993) who described it as a process of coming up with how much funds an organization expects to raise from which source, as well as how much of the expected funds is to be spent, when and on what activity and by which responsibility centre or responsible person. More recently, Fozzard (2008) made similar observations adding that budget planning was all about committing, prioritizing, and allocating financial resources to the various programmes to be implemented in a specified period. As has been noted in early research, the budgeting process provides some advantages to the organizations especially for planning (Rusth, 1994) and control (Rusth, 1994; Schiff & Lewin, 1970), spreading expectations of top managements to subordinates, evaluation, coordination, communication and decision making (Joshi, Mudhaki, and Bremser, 2003). The same is true in these contemporary times. Houlton (1982) says that budgeting control is the establishment of budget relating the responsibility of executives to the requirements of a policy and the continuous comparing actual with budgeted result either to secure by individual action the objectives of that policy or provide a basis for its revision.

A study on challenges facing budgetary control systems in developed countries by Organization for Economic Co-operation and Development (OECD, 2007) showed that budgets fail due to reasons such as budgets used as pressure tool, central decision-making process, lack of job security and managers' lack of training. Faris (2017) in presenting "Challenges of Budgeting & Budgetary Control" indicated that employee acceptance for the value of the budget, the manager's goal setting ability, the desire to employ responsibility accounting and adequate compensation for meeting targets, are all present issues in the field.

Budgetary Control

Importance

Olurankinse (2013) give details that a budget is a vital instrument in governance just as blood is vital to life. Organizations can use budgetary control in forecasting techniques in order to make plans for the future (Epstein & McFarlan, 2011). The literature suggests that all members should be part of this planning, yet a central theme found in the literature, an example of which is addressed by Omolehinwa (2003), is the opinion that budgets are usually planned by dominant individuals in an organisation and that monies allocated within are subject to the constraints imposed by other participants and the environment indicating how the available resources may be utilised to achieve whatever the dominant individuals agree to be the organisation priorities.

Mehta and Sinhgad (2014) highlighted how budgeting has come to be accepted as an efficient method of control within an organization. It is because having a proper budgetary control system allows companies to improve their managerial attitude and performance of the organisations, and provides organisations with useful information. Most, if not all, for profit, non-profit, private or public sector organizations plan and implement budgets for the reasons referred to above, yet variations were found about the degree to which budgets are controlled. Budget control is defined as the process of comparing budgeted plans and standards to actual financial results, analysing variances, and taking corrective action (Bedford, 2015; Umapathy, 1987).

Studies demonstrate that control usually ranges from loose to tight. Neely, Sutcliff, and Heyns (2001) pointed out that one of the biggest criticisms of traditional planning and budgeting is lack of responsiveness to changing conditions. Traditional

budgets are deemed to be fixed and rigid (Abdulla, 2008). A flexible planning and budgeting process on the other hand has been advocated in recent times so as to be responsive enough to account for change, yet, solid to provide discipline and direction. In pointing out the adverse effects of the extreme of non-control, a study conducted by Joseph (2014) observed that companies went down the path of failure because there were imperfections in how budgets were controlled, which the companies failed to recognize on their own. On the other hand, just the right amount of control has been determined as one of the best techniques for minimizing cost and maximizing profits (Mehta & Sinhgad, 2014).

Opponents of budgetary control like Neely et al. (2001) and Prendergust (2002) cited weaknesses of budgetary control systems. Some of these included restraining responsiveness, acting as barriers to change, being rarely strategically focused and often contradictory, strengthening vertical command and control, reinforcing departmental barriers rather than encouraging knowledge sharing, and making people feel undervalued. However, the literature also points out that there is value in how budgets are controlled. One such example was highlighted by Yuen (2004) who purported that a “tight but attainable” budget goal is the most effective way to motivate the employees’ performance and that it does in fact contribute to organizational goals. Conversely, loose budget control was not deemed as effective in meeting the predetermined goals. According to Joshua and Mohammed (2013), absence of effective budgetary control breeds disregard for laid down procedures, loss of focus and shoddy coordination of activities and these were found to be capable of crippling an organization.

It was noted from the literature read that controlling budgets were mainly perceived

positively in terms of setting standards, measuring the current performance and matching it against the standards and, where necessary, taking remedial action (Dyson, 2001; Mehta & Sinhgad, 2014). Many writers were of the view that since a budget is based on the best approximations for a specific period, management needs to monitor its progress at regular intervals. It is essential that management collect feedback on achievements and shortfalls so that it can take corrective action. The timeliness and accuracy of feedback were essential to the process of controlling. Furthermore, reports should compare actual results against the budget and a variance report should be generated. Variances could either be major or minor, where minor variances are usually ignored but major variances are investigated so that appropriate corrective action could be undertaken.

Dimensions

Of most repute found in the literature was the measure for budgetary control used by Merchant (1990), and subsequently directly adopted by Van der Stede (2001). It was operationalised by seven major measures covering the company's financial, as well as non-financial, performance. They are: revenue, profit, and return on investment, cost effectiveness, quality of product, productivity and market share. As a pioneer researcher in attempting to measure budgetary control, Van der Stede (2001) found that where there is considerable emphasis on meeting the budget; not easily accepting budget revisions during the year; having a detailed interest in specific budget-line items; not lightly tolerating deviations from interim budget targets; and intensively engaging in budget related communication, these are indicative of tight budgetary control.

The work of other researchers like Hemsing and Baker (2013), Conboy (2008), Jia (2007), and Dahlan et al. (2007), all concur with this approach for budgetary control.

As was stated earlier in this section, the basis of budgetary control is variance analysis (Kpedor, 2012). Horngren et al. (2010) advises that variances should be used for attention directing, not as problem solvers. Budgetary control is the system of controlling costs through budgets. It involves comparison of actual performance with the budgeted with the view of ascertaining whether what was planned agrees with actual performance. If deviations occur reasons for the difference are ascertained and recommendation of remedial action to match actual performance with plans is done (Kibunja, 2017).

Variance can be referred to unplanned change from the budgeted figure. Mehta and Sinhgad (2014) suggested that if there is any variation between the budgeted performance and the actual performance, the same is subject to analysis and corrective action. As such, when budgetary control is taking place, management monitors and compares the actual results of the planned budget, so that action can be taken to modify the operation of the business as time passes or possibly to change the budget for the operation if it becomes unachievable. Wijewardena, De Zoysa, Fonseka, and Perera (2004) measured control sophistication by looking at the frequency of budget monitoring as well as the subsequent remedial action taken should there be result deviation. To achieve effectiveness in budget preparation the management team of the firm should ensure the budgets for the allocated projects are implemented with the stipulated time and costs to enhance efficiency (Kimani, 2014).

The basic objectives of budgetary control are planning, coordination and control. It's difficult to discuss one without mentioning the other (Arora & Dua, 1995). Hirst (1987) explains that an effective budgetary control solves an organization's need to plan and consider how to confront future potential risks and opportunities by establishing an

efficient system of control. Shields and Young (1993) define the theory of budgeting as a detector of variances between organizational objectives and performance. Budgets are considered to be the core element of an efficient control process and consequently vital part to the umbrella concept of an effective budgetary control.

Jacob and Constantin (2015) in their recent work on performance evaluation in the health sector agree with previous researchers in the field on the characteristic of budgetary control. They noted that budgeting, continuous comparison of actual performance against budget performance, and reviewing budgets depending on the circumstances, are integral processes inherent to budgetary control. Further, the researchers also highlight some other ways in which budgetary control can be achieved. Some of these include the use of internal audits; internal checks in functions and activities; administrative controls in ensuring effective policies for staff, operating rules, regulations, procedures and methods; segregation of duties in the initiation, approval, authorization, execution and recording of transactions; charting of accounts showing the cost elements, cost centres, cost and level of expenditure limits; and the adoption of accounting policies regarding their assets sold and depreciation.

Neely, Sutcliff, and Heyns (2001) carried out a study on weaknesses of budgetary controls. The study maintained twelve cited weaknesses of budgetary control systems which poses a challenges in the use of the systems. These weaknesses included; restraining of responsiveness and acting as barriers to change, budgets are rarely strategically focused and often contradictory , they add little value especially given the time required to prepare them, they concentrate on cost reduction and not value addition, they strengthen vertical command and control, they do not reflect

emerging network structure that organizations are adopting, they encourage gaming and perverse behaviours, they reinforce departmental barriers rather than encourage knowledge sharing and make people feel undervalued.

Existing literature has evidently revealed that budgets controls have myriad of challenges that can at times be a hindrance towards achieving the overall effects of budgetary control. According to Margah (2005) many of the increasing problems experienced by organizations attempting to manage their budgetary control procedures have been laid at the door of the budget. In a world of constant change and uncertainty, Margah noted that a budget can become outdated during the budget year or even before it begins thus rendering little or no value to its intended purpose. In consideration of successful budgeting practices, the achievement of predefined budget objectives and the means used for achievement have been attributed to management efficiency (Grittner, 2013). Managers who employed budgetary control techniques essentially helped their organization in profit making or smooth functioning. This acted as a safety for many organizations because it helped to identify business risk and necessary steps could be taken to avoid the risk.

Further, in fragile economic times as have been facing economies globally, Alderson (2011) recommended that personnel should also unite when budgetary control becomes necessary to keep businesses buoyant through tough times. Supporting this united approach, researchers also noted that budgeting targets solely set by top management might be too difficult or too loose (Drury, 2013; Warren, Reeve, & Duchac, 2016). On the contrary, if solely set by subordinates, budgetary slacks could occur and the organization could get disoriented (Chaney, Copley, & Stone 2002). Thus, ideally

budgeting control system ought to be established by all members; where top management sets out the visions of organization development and subordinates deliver daily operational details (Chong & Johnson, 2007).

According to Perrin (2012), if a budgetary control program is to be successful, it must have complete acceptance and support of the persons who occupy key management positions. If lower or middle level management personnel sense that top management is lukewarm about budgetary controls, or if they sense that the top management simply tolerate budget as a necessary evil, then their own attitude will reflect similar lack of enthusiasm. Perrin further noted that budget is hard work and if top management is not enthusiastic and committed to budget program, then it is unlikely that anyone in the organization was either. Harkins and Egan (2007) commented that in the administration of a budgetary control program, it is particularly important that the top management does not use budget as a club to pressure employees or as way to blame someone if something goes wrong.

Budgetary Slack

Importance

Budgetary slack is defined as the act of a subordinate discouraging productive capabilities when he was given the opportunity to determine his standards (Young, 1985). Evidence indicates that there can be considerable budgetary slack in organisations (Schoute & Wiersma, 2007). This also remains as one of the primary controversial, unsolved issues in budgetary control. Managers have been found to engage in this behaviour for various reasons (Grant, 2007). These include social pressure, accountability pressure, or pressure to reveal private information they otherwise would not (Covaleski,

Evans III, Luft, & Shields, 2003).

Merchant (1985) proposed that budgetary slack is the difference between the amount budgeted for an area and that which is necessary. Budgetary slack has been defined as budget resources controlled by a manager in excess of optimal to accomplish his or her objectives (Kren, 2003). It is the excess over the required resources built by managers into a budget by underestimating revenues, overestimating costs or underestimating performance capabilities in order to make a budget target more easily achievable.

Similarly, budgetary slack was defined by Siegel and Marconi (1989) as the difference between the real resources needed to complete the work effectively with a number of resources that are added to complete the task. It was also defined as the amount by which a subordinate understates his productive capability when given a chance to select a work standard against which his performance will be evaluated (Young, 1985). Budgeting participation is necessary; hence, the budget could be made in accordance with the existing reality in the field. In the budgeting participation, collaboration between supervisors and subordinates. And the subordinates were involved in budgeting tend to develop a budget that benefits them in achieving it (not too high, so that subordinates will find it difficult to reach the budget targets). This is called the budgetary slack.

Recent definitions of budgetary slack have also followed this pattern. It was deemed to refer to budget resources controlled by a manager in excess of optimal to accomplish his or her objectives by Kren (2003). This meant that excess over the required resources were built by managers into a budget by underestimating revenues, overestimating costs or underestimating performance capabilities in order to make a budget target more easily achievable. In like manner, slack was also found to involve

the consumption of organizational resources by employees over and above what is required (that is, unjustifiable consumption of resources) by employees in terms of their efforts toward achieving the objectives of the organisation (Merchant & Van der Stede, 2007). Budgetary slack was present when someone understated their capabilities (by overestimating costs and underestimating revenue) or the capabilities of a business unit in their budget (Hobson, Mellon, & Stevens, 2011). Conversely, as highlighted by Van der Stede (2000) a budget had little slack if it required serious effort and a high degree of efficiency towards accomplishment. Budgetary slack is defined as the act of a subordinate discouraging productive capabilities when he was given the opportunity to determine his standards (Young, 1985).

Özer and Yilmaz (2011) explained that budgetary slack is generally observed during the participatory budgeting process. The type of participation to budgeting process in public and private sector organizations is quite different. In private organizations, participation appeared as a negotiation for extra budget, however; in public organizations, managers request the budget amounts (these amounts are determined by units' managers) for their units from the top management of their organizations or other governmental organizations. At this process, managers could request slack budget for some reasons such as protecting themselves against uncertainties or the possibility of cut-off.

The practice of budgetary slack not only occurs in private sectors but may be implemented by those in public sectors as well. It has been deemed a serious problem because budgetary slack gives opportunity towards other frauds (Firmansyah & Ghofar, 2017). Further, the existence of budgetary slack has been found to have negative impacts on the budget process because budgetary slack provides the potential for a

budget to be easily achieved and gives a false perception of mangers' performance (Hobson et al., 2011). It also defeats the basic purpose of budgets by creating inefficiency and wastage (Yuen, 2004) and potentially diminishes the quality of comparing actual performance to budgeted data.

Dimensions

Kahar et al. (2016) have noted that budgetary slack is observed when there is a difference between the amounts of the proposed budget subordinate to the best estimate of the number of organizations. Measurement of budgetary slack used instruments developed by Dunk (1993) with six questions using a seven degree Likert type scale. Scale seven showed the highest level of budgetary slack, whereas a scale of one indicates the lowest level of budgetary slack. The items in the instrument focused on the ease with which budgetary targets were achieved. In this study, respondents were asked to rate statements about their organization related to the following indicators: (a) standard used to increase productivity, (b) the monitoring, (c) their budget targets, (d) the level of difficulty in formulating the budget, and (e) demands on the budget. The indicators consisted of six items of questions each.

In another instance, Maiga, Nilsson, and Jacobs (2014) conducted a quantitative study and used a survey to find out from participants which characteristics were present in the budgeting process in order to explain if budgetary slack was present. Five defining features were highlighted: submitting budgets that are easily attainable; reverse coding so that budget targets induce high productivity; reverse coding so that budget target costs appear to be managed carefully; budget targets do not cause concern with improving efficiency in the business; and the degree of attainability of the budget.

Budgetary slack or looseness in the budget has been identified as one of the problems that arises because of participatory budgeting (Hansen & Mowen, 2005). Accounting researchers found that budgetary slack is influenced by several factors including the participation of subordinates in the preparation of the budget. Based on the results of Lu (2011), the researcher found that, consistent with empirical results, when the degree of budgetary feedback and budgetary participation were high, the budgetary motivation and budgetary attitude would be high, but the propensity to budgetary slack would be low, when the degree of budgetary motivation and budgetary attitude were high and the budgetary performance would also be high. Although Van der Stede (2000) identified budgetary slack as a consequence of budgetary controls, the literature in this area is scarce.

Budget Participation

Importance

Definitions for budgetary participation were focused on the extent to which those concerned within the organization partake in preparing the budget and guide the budget goals (Kenis, 1979; Noor et al., 2012; J. F. Shields & Shields, 1998). Numerous studies also defined budget participation as allowing subordinates to exchange information with supervisors to influence their budget target (Lau & Lim, 2002), to seek information for task completion (Brownell & Hirst, 1986), and to ensure budget adequacy (Nouri & Parker, 1998). Participation means that there is input from the stakeholders directly involved in the process. Lower-level managers do this through their budget estimations, which they then voice to the top-level management. As Noor et al. (2012) highlighted, participative budgeting is a means of total involvement in such that managers are

communicated to and influenced in the budgetary process, and subordinates exert influence over setting budgetary targets.

Participation budget was seen as the responsibility of the organization's managers in matters relating to the preparation of the budget (Govindarajan, 1986). In a participative budgeting process, both superiors and subordinates were emphasized as needing to be involved (Weil & Maher, 2005). To the extent to which those concerned with the budget participate in its preparation and influence the budget goals of their responsibility centres (Kenis, 1979), the literature identified the process as having the ability to yield benefits such as increasing employee motivation and commitment to the budget, fostering creativity among all levels of employees, increasing a sense of responsibility, increasing job satisfaction and also performance (Hoque, 2005; Weil & Maher, 2005).

Kahar et al. (2016) have cited that the participative budget enables the sector publics to reduce the budgetary slack associated with the individual works. Budget managers' engagement impacts on sharing of inter-unit information related to the work to make optimal decisions in achieving common objectives. Additionally, the involvement of the chief and the head of the budget has proven capable of bridging the necessary strategic policies in the framework of the process of job evaluation and targeting of the next period performance.

Yee, Khin, and Ismail (2016) conducted a quantitative study which pointed out that active participation in the setting of budgetary goals inspires workers to keep clearly defined goals in mind and be ready to consent to these goals as part of their duties, as well as to unite and strive toward their achievement. Traditionally, the literature suggests

that budget preparation and control were done at the top level and passed down (Churchill, 1984; Ljungman, 2009). However, involvement of all persons, including at the lower level has come to be seen as necessary in forming the budget and its implementation for the success of budgetary control. Nazli Nik Ahmad, Sulaiman and Alwi (2003) noted that in practice, budgets are executed at the lower level. Therefore, the success of budgetary control system depends more on active participation of all employees of the organization.

Abata (2014) further elaborated that participation of middle and lower managers in budgeting system may reduce information asymmetry in the organization and from this the lower level manager put high commitment to make and meet the budget plan. This shows that managers have dynamic roles in establishing budget with their day-to-day participation in departmental activities, thus they know what exactly the organization ability and need in allocating the resources through the budget making process.

Drury (2006) highlighted that any control process which does not recognize human nature and its requirements may be counterproductive. That is, participation must be emphasized; it has a huge potential for encouraging participation of organizational goals, improving attitude towards budgeting system and increasing subsequent performance. Additionally, Garrison, Noreen, and Seal (2003) states that participation adds reliability to the budgeting process and creates greater commitment and accountability toward the budget, as budgets are set by management but the people to realize the budget standards are the staff. Chong and Johnson (2007) also confirmed that participation in setting the budget influences subordinates' budget goal level and motivations (i.e.

budget goal acceptance and budget goal commitment), which ultimately enhances their job performance. In this research budget participation would be defined as a process in which the budget holder is involved in the preparation of their budget and some of their recommendations are included in the final approved budget.

Dimensions

Budget participation was measured in an early study by the level of involvement to give opinion or suggestion and the amount of meetings held with mid-level management before the approval of the final budget. It is assumed that by the time the budget is approved the organisation would have fully engage mid-level managers and actively listen to their opinions and suggestion and some of these may be included in the To measure the level of participation of a manager or subordinate in the budgeting process, a survey instrument was used which was developed by Kenis (1979) with the indicators related to (a) their influence in determining the targets of budget, (b) their control over budget formulation, (c) cooperation in formulating budget, (d) assessment of the budget. A Likert scale of 1 to 5 was employed.

In another study, to measure this variable, i.e. budgetary participation, an instrument consisting of six question items was developed by Milani (1975). This instrument had a high validity rate and has since been used in several other studies. Using this instrument, the respondents were asked to answer six questions on a scale of 1 to 7. Scale 7 showed the highest level of participation, while 1 scale showed the lowest level of participation.

In a recent study, Firmansyah and Ghofar (2017) measured budgetary participation as the extent of individual participation, either high or middle official, towards budgetary

arrangement process in an organization's Regional Work Unit. Key indicators of this included participation in budgetary arrangement, the effect towards budgetary establishment and the need to give opinion or suggestion.

Kahar et al. (2016) spoke about participative budgeting as the level of involvement and influence on individuals in the budget process. To measure this variable, the researchers used an instrument consisting of six items of questions developed by Milani (1975) instrument has a sufficient degree of validity and has been used in previous studies. In this instrument, each respondent was asked to answer six questions using a scale of 1-7. Scale 7 showed the highest level of participation, while the scale of 1 indicates the lowest level of participation.

Management Perception

Importance

Psychological investigation of human behaviour began with the study of perception by Wielheim Wundh in Germany in 1879. Since that time, it has been significant in understanding human behaviour. The important revelation is that no two people experience and interpret sensations, situations, or their own feelings the same way Otara (2011). Perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world (Lindsay & Norman, 2013). It refers to the way we all interpret our experiences. It is a marvellous and difficult part of human behaviour and in businesses, managers must realize that all individuals have differing perceptions. People do what they perceive will serve their values. This means that there is always a time gap between the brain's consideration of a behaviour and the behaviour itself, therefore, the processing that takes place in this time period, it is what can be

referred to as perception (Otara, 2011).

Lu (2011) pointed out that budgetary perception refers to an administrator's general attitude, enthusiasm and rational toward the budgeting practise. This will, in many cases, be influenced by the value administrators place on the budget and their own experiences of it being valuable in realizing success. Keeton and Mengistu (1992) supports the need for organizations to analyse varying perceptions. The importance for analysing perceptions is critical for two reasons. On theoretical grounds, differences in perceptions among organizational members suggest that the existence of a shared value system (such as strategy development culture) throughout the organization be questioned. On practical grounds, identifying differences in perceptions of values held by organizational members would have implications for training and development programs (Ozleblebici, 2014).

The literature suggests that perception of budgetary control by managers depended on both their personal characteristics and the financial situation of their departments (Nylinder, 2009). Some of their personal characteristics relate to their orientation towards results, assertiveness, their focus on having a global vision through delegation, and their overall desire to direct, motivate, and lead. Specific to the financial standing of the business, research by Johansson and Siverbo (2014) combined survey and archival data from 196 Swedish municipalities and confirmed that if financial turbulence is substantial then organizations benefit from tight budget control as they seek to control budget deviation.

Findings by Lyne (1992) showed that budget pressure was not perceived as a major problem; in fact, increased pressure was considered beneficial to the success of

the business even by lower management. This occurred even though the literature on budget pressure previously predicted that first-line managers would have resented budget pressure and that dysfunctional consequences would follow. Also, when employees perceived that they had a control over their destiny, it was likely for them to exhibit higher levels of job satisfaction and increased level of performance (Otley, 2006).

Dimensions

While there is a multiplicity of studies, both qualitative and quantitative, that look at perceptions, few studies were identified in the literature that measured budgetary control perceptions. This demonstrates a need for research in this area. In a study conducted by Alfirević (2017) that looked at top management perception of the need for organisational restructuring in large Croatian enterprises, a standardised, discrete, ordinal scale measured the perception with five degrees denoting (dis)agreement (do not agree at all, do not agree, agree partially, agree and agree completely) with the statements asserting the rising level of threats from the business environment. Therefore, the results showing a higher degree of agreement denote the higher degree of threat perception, and vice versa.

Wachira (2018) also studies management perception using a descriptive research design where the study sample size was 100 managerial employees and 82 bank customers. The study used stratified random sampling to sample respondents. The primary data was collected by using a self-administered questionnaire while secondary data was obtained from the published annual reports spanning five years (2013 - 2017). In analysing the quantitative data, descriptive statistics and t-test were used while qualitative data was analysed using content analysis.

Organizational performance

Importance

Budgetary control has been used as a measure of financial performance in the literature (Adong & Jagongo, 2013). Even though the notion of organizational performance is very familiar in the academic literature, its definition is difficult because of its many meanings. For this purpose, there isn't a generally accepted explanation of this concept. For decades, the term 'organisational performance' has been defined from a wide range of perspectives; some scholars distinguish it as multi-dimensional, proposing that each organisation has particular criteria for organisational performance, and the criteria applicable in one organisation may not be appropriate in others (Lumpkin & Dess 2001). Organizations have an important role in our daily lives and therefore, successful organizations represent a key ingredient for developing nations. Thus, many economists consider organizations and institutions similar to an engine in determining the economic, social and political progress (Gavrea, Ilies, & Stegerean, 2011).

Definitions include that organizational performance refers to how well the company is doing relative to other companies as perceived by budget supervisors (Van der Stede, 2000). In the context of organisational financial performance, performance is seen as a measure of the change of financial condition of an organisation or the financial outcomes that result from management decisions and execution of those decisions by members of the organisation (Carton & Hofer, 2006). Organisational performance could also be defined as the ability to reach a desired objective or the degree to which anticipated results are achieved (Zumitzavan & Michie, 2015). The concept of organization

performance is based upon the idea that an organization is the voluntary association of productive assets, encompassing capital, human and resources; for the purpose of achieving a shared purpose (Barney, 2002).

Halachmi (2005) stated that researchers have emphasised that understanding organisational performance can help to distinguish techniques for improvement. Financial and nonfinancial indicators should be taken into consideration because they offer information on the degree of achievement of objectives and results (Lebas & Euske, 2006). Different organisations have different purposes in running their business; therefore, the determined goals of each organisation may be different and the levels of organisational performance may be varied (Fan, Wong, & Zhang, 2014).

Budgets have generally been used by organizations as a basis for performance assessment. Drury (2001) stated that budgets provide a useful means for managers in evaluating their performance and the overall organization performance through comparing budgeted plans with actual results to determine if planned objectives have been realised in case of variances appropriate measures are emphasized. Joseph (2014) measured organizational performance using liquidity and profitability ratios the three ratio used in the analysis were: Return on investment, current ratio, and return on capital. Organizational performance has also been traditionally defined multi-dimensionally by looking at four different categories: achieving organisational goals, increasing resourcefulness, satisfying customers and improving internal processes (Redshaw, 2001). Hansen, Otley, and Van der Stede (2003) stated that the use of appropriate budgets was promoted by educators, academics and accounting practitioners as a means of enhancing financial performance.

Dimensions

According to Van der Stede (2000), and Hansen and Van der Stede (2004), organizational performance could be measured through the self-evaluation of managers using three items: the company's financial condition, market position, and internal performance, in comparison with rival companies. Again, as in other similar research, responses were coded from (1) completely disagree, to (7) strongly agree. As such, in this research organizational performance would be measured using the current ratio, net profit ratio and the variance between budgeted net profit and actual net profit.

Relationships between Variables and Research about the Variables

Organizational Performance and Budgetary Control

Quite a number of empirical studies have been done that focused on the relationship between budgeting control system and organizational performance. A review of the literature to this point has led to studies which show both positive and negative correlations between budgetary control and organizational performance also (Brownell, 1981; Epstein & McFarlan, 2011; Silva & Jayamaha, 2012). Additionally, some researchers found no correlation (Blumenfeld & Leidly, 1969; Bryan & Locke, 1967).

In the study conducted by Silva and Jayamaha (2012), data was extracted from an apparel industry's financial statements, so that the impact of budgeting would be found in relation to performance. Correlation coefficients and regression analysis were calculated in this study and this showed that the budgetary process does indeed have significant associations with the organizational performance of apparel industry in Sri Lanka. This confirmed that efficient companies needed to maintain sound budgetary

process which in turn would contribute to higher levels of organizational performance. The work agrees with the findings of another study conducted many years before, where Brownell (1981) found that the budgeting control system has a direct and positive effect on organizational performance.

Epstein and McFarlan (2011) in an article that emphasized measuring the efficiency and effectiveness of a non-profit's performance, found that budgetary control was one of the important tools in achieving efficiency for non-profit organizations. This study was a bit different from others which were solely based on financials as the organization's resource gathering and disbursing activities were examined in five clusters: inputs, activities, outputs, outcomes, and impacts. Performance metrics was a main issue discussed and it was noted that financial performance coupled with adhering to the organization's mission are important indicators. The results of the study revealed that effective budgetary control improves performance overall.

Marcormick and Hardcastle (2011) also carried out a study on budgetary control and organizational performance in Europe. A sample of 40 government parastatals were used for establishing the relationship between budgetary control and organizational performance for which secondary data was used and a period of ten years was reviewed. A regression model was used for data analysis and the results of data analysis revealed a positive relationship between budgetary control and organizational performance. This was also supported by Kipkemboi (2013) who explained that there is a positive effect of budgetary control on performance of Non-Governmental Organizations in Kenya as was measured by the *R* square statistical measure at 14.3%. It has been recommended that employees be sensitized on budgetary controls and the effect

on performance of the organization. From the above literature reviewed, little has been identified as having been done in relation to budgetary control and effectiveness of nongovernmental organizations. This study is however geared to establish whether there is any relationship between budgetary control and effectiveness of nongovernmental organizations as a part of its research.

Similarly, Gacheru (2012) and Mohamed, Kerosi, and Tirimba (2015) found that budget preparation, budgetary control and budget implementation significantly influenced budget variance. Most studies have concentrated on budgetary implementation and how it affects organizational performance in both the public and private sectors. Though these studies tried to address the correlation between budgetary implementation tools on organizational performance, they did not conclusively address how effective budgetary control techniques are, on organizational performance.

In a study conducted by Mohamed et al. (2015) where they examined how budgetary control can impact on the performance of the organization, primary data was collected by the use of questioners, while secondary data was collected from published materials. Data was analysed through the use of Statistical Packages for Social Scientists (SPSS) and were presented in form of frequency Tables and charts. Findings on effectiveness of budgetary control techniques showed that responsibility accounting, Variance analysis and Zero Based Budgeting enhances Budget Control and improves efficiency and productively. Further it was established that Variance cost analysis alone may not affect performance of an organization but it will influence decision making which will in turn affect organizational performance. The study recommended that organizational staff needs to be trained on the existing budgetary control techniques to

enhance business decision making and improve efficiency and productivity. The study recommends further research on budget planning and organizational Performance and also the relationship between budget implementation and organizational performance.

Budgetary Slack and Budgetary Control

Chong and Sudarso (2016) highlighted that one issue that is arguably the most problematic in the budgeting process is the creation of budgetary slack. From an organizational perspective, the adverse implication of budgetary slack is that slack budgets do not represent managers' best estimates of expected results, and they hinder the planning and control, resource allocation, and coordination of business unit activities. A laboratory experiment was conducted by the researchers and the opportunity for managers to build slack into their budgets was observed. This result was consistent with theoretical expectations that individuals may be more tempted to succumb to extreme positions or make risky decisions because they inherently feel more accountable for their decisions. Individuals' heightened feelings of accountability arise, in part, because there is no collective unit within which they can hide or shirk their responsibility.

In a similar study conducted many years prior by Young (1985), it was found that when persons were allowed to participate in budgetary standard setting, they usually build slack into the budget. This supports budgetary control since the study explained that the amount of slack was positively associated with a measure of risk aversion, supporting the idea that building in slack is a response to uncertainty.

Van der Stede (2000) found spill over effects exist between two alleged dysfunctional consequences of a rigid budgetary control style: Budget slack creation and managerial short-term orientation. The data support this contention: Reducing one form of

dysfunctional behaviour (slack creation) through rigid controls seems to spill over into another form (stronger management focus on business matters that affect short-term results). However, the budgetary control styles that organizations implement, as well as the behaviours that they encourage, may be affected by two important antecedents: business unit past performance and competitive strategy. The results indicate that business units that either pursue a differentiation strategy or have been more profitable are subject to less rigid budgetary controls, which augment the propensity to build slack as well as the tendency for managers to think long-term.

Özer and Yilmaz (2011) conducted a study where the data was obtained through questionnaires which were responded by 465 managers who work in different public organizations. The results of the analyses showed that effectiveness of budgetary control, ethical work climate and procedural justice perception of managers have a statistically significant and negative impact on managers' propensity to create budgetary slack in public organizations.

Bedford, Malmi, and Sandelin (2016) used data from a survey of top managers the analysis reveals that there are multiple ways by which firms can effectively combine MC practices in a given strategic context. Furthermore, the analysis shows that not all MC practices found to be relevant in isolation are relevant when examined simultaneously as a package. Second, based on a comparison of effective MC packages this study examines interdependencies between MC practices (i.e. MC systems). Results show that in defender firms a diagnostic control use of accounting and mechanistic structural controls act as complements, while mechanistic structural controls and measure diversity act as substitutes. In prospector firms an interactive control use of accounting and

organic structural controls are found to have complementary effects. These results indicate that the effectiveness of accounting control and structural control choices are determined not only by their fit with strategic context but also by how they fit with each other. This study also demonstrates how an understanding of MC packages can provide guidance for theory development and empirical analysis of MC systems.

Studies have shown that participation in the establishment of budget targets provides managers the opportunity to create budget slack (Kren, 1993; Young, 1985). However, studies have also argued that participation in the budget process is not responsible for propensity to introduce slack into the budget (Lu, 2011). Empirically, there has been found a negative relationship between participation and slack, which is consistent with prior survey work (Dunk, 1993; Lau & Eggleton, 2003; Onsi, 1973).

Budgetary Participation and Budgetary Control

Despite many studies on the topic, the impact of managerial participation on the creation of budgetary slack remains unclear (Kruis, Speklé, & Widener, 2016). Collins (1978), explored the interaction effect among personal flexibility, budgetary characteristics (accuracy, controllability, and participation), demographic characteristics, and attitudes on budgetary responses. Here, the results indicated that perceived budgetary characteristics (accuracy, estimate certainty, controllability, and participation), and positive attitudes toward these characteristics are the determinants affecting budgetary responses. These resulted from participation.

The literature suggests that budgeting targets solely set by top management might be too difficult or too loose. On the contrary, if solely set by subordinates, budgetary slacks could occur and the organization could get disoriented (Chaney et al., 2002).

Thus, ideally budgeting control system should be established by all members, top management proposes the visions of organization development, whereas subordinates provide information on daily operation details (Chong & Johnson, 2007).

Searfoss and Monczka (1973) looked at the relationship between perceived participation in the budget process and both motivation to achieve the budget and level in the organizational hierarchy. The need for authoritarianism and independence were introduced as moderator variables. The results of this research indicated a positive relationship between perceived participation and motivation, and organizational level and perceived participation. In a similar vein, according to Milliken (1990), participation of strategic decision-making responsibilities allows top managers to be exposed to the opinions of others who may be more active boundary spanners than themselves. These boundary spanners are likely to participate in external networks to exchange information about environmental trends and their potential significance. Abernethy and Brownell (1999) asserted that the interactive use of budgets, with its focus on dialogue, communication and learning, between top management and subordinates as well as among managers at the same level, is consistent with the operation of cross-functional liaison groups. Indeed, it can be seen, itself, as an integrative liaison device that breaks down the functional and hierarchical barriers that inhibit information flows.

Dunk (1993) found that a major concern in the literature is that participation by subordinates may result in the generation of slack budgets. In one of the earliest studies, Williamson (1964) concluded that subordinate managers will try to influence the budget-setting process and obtain slack budgets. In conformance with Merchant (1985), Lukka (1988), and Young (1985), all agreed that budgetary slack does incorporate budget

amounts that make it easier to attain. Thus, managers may build slack into budgets by strategies that understate revenues and overstate costs (Schiff & Lewin, 1970).

Whether budgetary slack is a likely outcome in all participative budget setting is a matter of conjecture. Camman (1976), Merchant (1985), and Onsi (1973) provide evidence that participation may lead to a reduction in slack, which can be attributed to the positive communication between managers so that subordinates feel less pressure to create slack. The literature proposed a link between participation and budgetary slack through two variables: superiors' budget emphasis in their evaluation of subordinate performance, and the degree of information asymmetry between superiors and subordinates. When participation, budget emphasis, and information asymmetry are high (low), slack will be high (low) (Dunk, 1993).

One study explored the relationship of participative budgeting on budgetary slack in the public sector in Indonesia, by examining the roles of job satisfaction on these variables. A total of 185 budget managers of regional work units in the in North Maluku province government, Indonesia, participated in the survey (Kahar et al., 2016). The effective rate of return was 82.52 percent. A structural equation modelling was used to examine the direct and indirect effects of participative budgeting on budgetary slack. In particular, the study gives empirical evidences that participative budgeting factors affect budgetary slack mediated by intervening variables factors of job satisfaction. The results revealed the significantly negative effect of participative budgeting on budgetary slack, the significantly positive effect of participative budgeting on job satisfaction. This result affirmed the significantly negative impact of job satisfaction as a mediating variable on budgetary slack. However, the results could not find the indication of moderating effect

of job satisfaction in the relationship of these variables.

Kahar et al. (2016) used participative budgeting as an independent variable, budgetary slack as the dependent variable and job satisfaction as mediating and moderating variables. These variables were measured by questionnaire that was adopted from previous related research. Budgetary slack is defined as the difference between the real resources needed to complete the work effectively with a number of resources that are added to complete the task (Siegel & Marconi, 1989). Manager creates slack by estimating lower income, higher cost estimating, or declare too high number of inputs required to produce a unit of product. They do this to provide a safety margin to fulfil budgeted goals. Webster (2001) notes that important management functions such as communication, determination of corporate goals and objectives, resource allocation, appraising of performance functions and financial performance have been found to have positive relations with budgetary controls in place.

Management Perception and Budgetary Control

Studies indicate that in some organizations budgetary commitment inform managers' budget behaviours. In essence, for this to occur, managers need to feel positively about their job in order to have the motivation to meet budget targets. "In the context of job satisfaction of budgeteers as an output of a budget system not only their satisfaction with their jobs in an overall sense but also their feelings of pressure and anxiety in their jobs are considered" (Hofstede, 2012, p. 3).

Highlighting how important it is for managers to have a proper outlook on how the organization is performing, inclusive of the environment it is in and future prospects, Top managers often misperceive environmental changes because they cannot

adequately process (that is to view, search, and interpret) information with the above characteristics. Top managers who incorrectly perceive the environment have difficulty in formulating effective strategic decisions for their firms. The variables affecting individuals' information processing capability, researchers have typically adopted two separate approaches: personal attributes or contextual attributes. Examples of personal attributes are cognitive complexity, open-mindedness, mental model of success, etc. Examples of contextual attributes are: organizational culture, organizational structure, etc.

Empirical results from a study conducted by Myeong (1996) indicated that the perceived impacts of information technologies on budget tasks are greatly determined by the external influences and the ways the information system and its services are established or managed. Contingency perspective that the perceived impacts of information technologies on budget tasks may vary depending upon contingencies where budget managers are reacting to conditions in order to match existing problems associated with the internal and the external environment of budgeting to IT solutions. An empirical test of the theoretical model was conducted using a data set collected by mail surveys for budget managers in the largest 450 counties in the U.S.

In a study conducted by Marginson and Ogden (2005), a five-item instrument (reduced from six items on the basis of confirmatory factor analysis) was used to measure respondents' perceptions as to the degree of strategic empowerment they were afforded in the discharge of their role. It was argued that when managers are met with uncertainties associated with their role in the organization, they may respond by becoming positively committed to achieving budgetary targets as budgets offer a source

of structure and certainty. The use of budgets as an antidote to role ambiguity was a powerful influence on the manager's budgeting behaviour. Budgetary commitment brought on by the experience of role ambiguity may over-ride the potential for recognised explanatory variables such as leadership style, the expectations of the superior, and occupational socialisation, to inform managers' budgeting behaviours in these circumstances. Budgets, it seems, may be as useful to the individual as they are problematic.

The experience of role ambiguity makes it unlikely for employees to adopt a flexible approach to the budget or even to forgo budgetary targets in favour of longer-term payoffs; such behaviour serves to increase perceptions of uncertainty (e.g. how much flexibility) and ambiguity (e.g. is it for the 'right' strategic reason that the subordinate is being instructed to forgo the budget) at a time when certainty is desired. The coping strategy is committing to the budget. The reward is a more gratifying role experience (Rizzo, House, & Lirtzman, 1970). Those who experience role ambiguity are thus unlikely to adopt a flexible approach to the budget or even to forgo budgetary targets in favour of longer-term payoffs; such behaviour serves to increase perceptions of uncertainty (e.g. how much flexibility) and ambiguity (e.g. is it for the 'right' strategic reason that the subordinate is being instructed to forgo the budget) at a time when certainty is desired. The coping strategy is committing to the budget. The reward is a more gratifying role experience (Rizzo et al., 1970).

Another area of consideration were notions of perceived legitimacy and 'ego involvement', which come from managers' ability to participate in the setting of budgetary targets (Collins, 1982). This role impacts on the decision to create slack, and

this role likely also impacts on other decisions business unit managers take, for instance, decisions on investments or on the business unit strategy.

CHAPTER III

METHODOLOGY

Introduction

The preceding chapter has provided a review of the literature and support for the research question, aim and objectives. The purpose of this chapter is to describe the methods and procedures used in answering the research question and for testing the hypotheses raised earlier in the study. In line with the recommendations by Roberts, Wallace and Farrell (2003), this chapter provides enough detail to the extent that other researchers can easily understand and apply the methodology to similar studies.

This chapter is composed of the description of the methodology used during the investigation and addresses the design of the study, which includes: (a) the type of research, (b) the study population, (c) the sample, (d) the measuring instrument, (e) the null hypotheses, (f) the data collection and (g) the data analysis.

Type of Investigation

This is a quantitative investigation. According to Saunders and Lewis (2012), this description is used whenever the research study is concerned with exploring law-like generalizations, like cause and effect relationships and it intends to put forward a stable reality where things can be observed objectively and be recorded in a quantitative manner, using specific and precise data and statistical analysis (Balarabe Kura, 2012). Further described, it is noted that testing through the use of quantitative methods

is characterized by the use of statistical analysis with the intent of measuring something (Patton & Cochran, 2002).

This study can also be described as positivist. Saunders, Lewis, and Thornhill (2009) stated that a positivist study involves using existing theory to develop hypotheses for testing and is concerned with facts rather than impressions and that such facts are consistent with the notion of observable social reality, similar to that employed by the physical and natural scientists. Cohen, Manion and Morrison (2007) also added that the positivist researcher views knowledge as being hard, objective and tangible, and therefore avoids getting involved with the research subjects. This approach uses empirical investigation and quantitative analysis to develop formal and explanatory theory (Saunders & Lewis, 2012). Studies employing the positivist approach is most commonly linked with quantitative methods of data collection and analysis and the most popular quantitative research purposes are to describe, compare, and attribute causality (M. D. Gall, Gall, & Borg, 2007; Hittleman & Simon, 1992; Mackenzie & Knipe, 2006).

A deductive approach is more often linked to the positivist view (Gray, 2014) and often includes a hypothesis to prove assumptions. This deductive approach was deemed best suited to this thesis. Deductive research intends to explain causal relationships between variables with operationalized concepts, to ensure clear definitions and a highly structured approach with sufficient samples aiming to achieve the generalization of research results (Saunders & Lewis, 2012).

The investigation was transversal (Hernández Sampieri, Fernández Collado, & Baptista Lucio, 2014), since data were collected in a single moment to describe the variables and their interpretation was analyzed. The administration of the instrument

was in a single moment between the months of February to July of the year 2018. The research was descriptive, since according to Sekaran and Bougie (2016) descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. This type of research method is not simply amassing and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships in the area in which it operates, and the sector to which the company belongs. It was field research, because the data was collected from tertiary education providers in the Caribbean.

Population

Creswell (2016) explained that a population is any group of individuals who have one or more characteristics in common that are of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group. In this research study, institutions of higher learning constituted the population.

Sample

Sampling is the process by which a relatively small number of individuals or measures of individuals, objects or events is chosen and analyzed in order to find out something about the entire population from which it was chosen. According to Creswell (2016), sample size refers to the number of units or people that are chosen from which the researcher wishes to gather information or data. Sampling procedures provide generalizations on the basis of relatively small preparations of the population (Salaria, 2012), explained clearer, sampling is taking any portion of a population or universe as representative of that population or universe.

Total population sampling is a type of purposive selection technique that involves examining the entire population that have a particular set of characteristics (Pratt, Schlaifer, Raiffa, & Schlaifer, 1995). In this study, institutions of higher learning in the Caribbean made up the sample which constituted 193 registered institutions. Of all the institutions contacted 101 responded giving a response rate of 52%.

Measuring Instruments

The term measuring instrument is an umbrella term which is used by researchers to describe a measurement device such as a survey, test, questionnaire, etc. In this section of the paper, the different variables used in this study will be listed, descriptions will be given related to the development of the instrument, content and construct validity will be explained, and information will be shared on the reliability of the instrument used.

Variables

Variables are the conditions or characteristics that the experimenter manipulates, controls, or observes. The independent variables are the ones the experimenter manipulates or controls in his attempt to ascertain their relationship to observed phenomena. The dependent variables are the conditions or characteristics that experimenter introduces, removes, or changes independent variables (Best, 2007). The variables used in this research were: (a) dependent variable (budgetary control), (b) criterion or independent variables (budgetary slack, budget participation, management performance and management perception.

Instrument Development

Elaborated below, is a description of the process used in developing the instruments

used in the present study. In consecutive order:

1. A conceptual definition of the variables collaborative relationships were made.

2. The variable relationships of collaboration were dimensioned.

3. Scripts relevant to the purpose of the study were determined for presenting a standard set of questions and response options using a Likert scale.

4. After the instrument was formed, the assistance of an expert writer in the field was requested for review.

5. The instrument then continued to validate content in terms of field testing for relevance and clearness; two experts in the field and five tertiary education providers were provided with the evaluation tool, showing the name of the variable and the indicators. Each indicator or item had a five-point Likert scale to assess relevance and clarity.

6. After the validity test, the final instrument that was used in this study was derived and consists of three sections: (a) general instructions, (b) general information and (c) variables, with 40 statements.

7. After approval from the advisor, the data was collected.

The instrument used is shown in Appendix A.

Instrument Validity

Kimberlin and Winterstein (2008) stated that content validity addresses how well the items developed to operationalize a construct provide an adequate and representative sample of all the items that might measure the construct of interest. Given that there is no statistical test to determine whether a measure adequately covers a content area or adequately represents a construct, content validity in this study depended on

the judgment of experts in the field.

Content Validity

The validation process of the content of the instruments was as follows:

1. Several interviews were conducted with my advisor to find out his opinion on the measurement of the variables and to confirm if my method of inquiry into the literature which guided how I measured my variables was appropriate.

2. The literature was reviewed in different databases on the variables budgetary control, budgetary slack, budget participation, organizational performance, and management perception.

3. Then, taking into account the list of dimensions and criteria of the instrument to be proposed, in agreement with the advisor, those that would be used in the instrument were selected.

4. Consultations and reviews of the research were carried out by the advisors.

5. Clarity and relevance were evaluated with the help of two experts in the subject.

Validity of the Constructs

The Factorial Analysis Procedure was used to evaluate the validity of the constructs of budgetary control, budgetary slack, budget participation, organizational performance, and management perception presented in this section. The results of the validation of each variable are presented below. Next, the statistical tests of the factor analysis for the constructs are presented.

Budgetary Control

The instrument of budgetary control was made up of eight indicators (A1 to A8).

The factorial analysis procedure was used to evaluate the validity of the budgetary control construct (see Appendix B). In the analysis of the correlation matrix, it was found that the majority of statements have a positive correlation greater than .3. Most correlations make the factor analysis appropriate.

Regarding the sample adequacy measure KMO, a value very close to the unit (KMO = .762) was found. For the Bartlett sphericity test, it was found that the results (X^2 = 109.301, df = 28, p = .000) are significant (shown in Appendix B). When analyzing the anti-image covariance matrix, it was verified that the values of the main diagonal are significantly greater than zero (greater than .676).

Regarding the extraction statistics by main components, it was found that the commonality values (Com_{min} = .310; Com_{max} = .595), the 8 items are superior to the extraction criteria (Com = .300). In relation to the total variance explained, a confirmatory analysis was carried out with three factors, explaining 59.16% of the total variance (shown in Appendix B).

As for the rotated factorial solution, the Varimax method was used. Table 1 presents information comparing the relative saturations of each indicator for the five factors of budgetary control.

The first factor was constituted by four indicators and was assigned the name of "action in deficit". The indicators were the following: "We have experienced budget deficits over the last three years" (A3), "It is alright for us to delay action towards budget Issues" (A4), "We have experienced actual expenses more than budgeted expenses in the last three years" (A5) and "Over the last three years we have been experiencing financial difficulty" (A7). The second factor was constituted by two indicators and was

Table 1

Rotated Matrix of Budgetary Control

	Component				
Items	1	2	3	4	5
We engage in communication about budgeting once a month.			.907		
We routinely evaluate the budget.				.904	
We have experienced budget deficits over the last three years.	.681				
It is alright for us to delay action towards budget issues.	.586	.518			
We have experienced actual expenses more than budgeted expenses in the last three years.	.727				
We have experienced actual income more than budgeted income in the last three years.		.922			
Over the last three years we have been experiencing financial difficulty.	.772				
Our administration is concerned about expenditure.					.951

assigned the name of "spending". The indicators were the following: " "We have experienced budget deficits over the last three years" (A3), and "We have experienced actual income more than budgeted income in the last three years" (A6). The third factor was constituted by one indicator and was assigned the name of "communication". The indicator was the following: " We engage in communication about budgeting once a month" (A1). The fourth factor was constituted by one indicator and was assigned the name of "evaluate". The indicator was the following: "We routinely evaluate the budget" (A2). The fifth factor was constituted by one indicator and was assigned the name of "alarms". The indicator was the following: "Our administration is concerned about

expenditure” (A8).

Budgetary Slack

The construct of budgetary slack was made up of four indicators (B1 to B4). The factorial analysis procedure was used to evaluate the validity of the budgetary slack construct. In the analysis of the correlation matrix, it was found that the majority of statements have a positive correlation (shown in Appendix B).

Regarding the sample adequacy measure KMO, a value close to the unit (KMO = .648) was found. For the Bartlett sphericity test, it was found that the results (X^2 = 77.827, df = 6, p = .000) are significant (shown in Appendix B). When analyzing the anti-image covariance matrix, it was verified that the values of the main diagonal are significantly greater than zero (greater than .58).

For the extraction statistics by main components, it was found that the commonality values (Com_{min} = .824; Com_{max} = .993), the 4 items are superior to the extraction criteria (Com = .300). In relation to the total variance explained, a confirmatory analysis was carried out with two factors, explaining 75.22% of the total variance (shown in Appendix B).

As for the rotated factorial solution, the Varimax method was used. Table 2 presents information comparing the relative saturations of each indicator for three factors of budgetary slack.

The first factor was constituted by two indicators and was assigned the name of "achieve target". The indicators were the following: “It is easy to meet our income targets” (B2), and “Our departments have met their targets every year over the past three years” (B4). “The second factor was constituted by one indicator and was assigned the name

Table 2

Rotated Matrix for Budgetary Slack

Items	Component 1	2	3
I doubt that departmental budgets can improve efficiency in the area of responsibility			.964
It is easy to meet our income targets	.853		
Our departments tend to request more than what they need		.980	
Our departments have met their targets every year over the past three years	.858		

of "excess resources" The indicator was the following: "Our departments tend to request more than what they need" (B3). The third factor was constituted by one indicator and was assigned the name of "efficiency". The indicator was the following: "I doubt that departmental budgets can improve efficiency in the area of responsibility" (B1).

Management Perception

The construct of management perception was made up of four indicators (C1 to C4). The factorial analysis procedure was used to evaluate the validity of the budgetary control construct. In the analysis of the correlation matrix, it was found that the majority of statements have a positive correlation (shown in Appendix B).

Regarding the sample adequacy measure KMO, a value close to the unit (KMO = .732) was found. For the Bartlett sphericity test, it was found that the results (X^2 = 124.715, df = 6, p = .000) are significant (shown in Appendix B). When analyzing the anti-image covariance matrix, it was verified that the values of the main diagonal are significantly greater than zero (greater than .48).

For the extraction statistics by main components, it was found that the commonality

values (Com_{min} = .842; Com_{max} = .996), the 4 items are superior to the extraction criteria (*Com* = .300). In relation to the total variance explained, a confirmatory analysis was carried out with two factors, explaining 80.24% of the total variance (shown in Appendix B).

As for the rotated factorial solution, the Varimax method was used. Table 3 presents information comparing the relative saturations of each indicator for two factors of management perception.

The first factor was constituted by three indicators and was assigned the name of "adverse equality". The indicators were the following: "There is unfairness in the budgetary allocation" (C11), "There is doubt among management about job security" (C22), "There is a sense of distrust with the organization" (C33). The second factor was constituted by one indicator and was assigned the name of "unrealistic". The indicators were the following: "We are expected to achieve unrealistic targets" (C44).

Budget Participation

The construct of budget participation was made up of eight indicators (D1 to D4). The factorial analysis procedure was used to evaluate the validity of the budgetary control construct. In the analysis of the correlation matrix, it was found that the majority

Table 3

Rotated Matrix for Management Perception

	Component	
Items	1	2
There is unfairness in the budgetary allocation	.909	
There is doubt among management about job security	.739	
There is a sense of distrust with the organization	.806	
We are expected to achieve unrealistic targets		.965

of statements have a positive correlation (shown in Appendix B).

Regarding the sample adequacy measure KMO, a value close to the unit (KMO = .782) was found. For the Bartlett sphericity test, it was found that the results (X^2 = 137.607, df = 6, p = .000) are significant (shown in Appendix B). When analyzing the anti-image covariance matrix, it was verified that the values of the main diagonal are greater than zero (greater than .47).

For the extraction statistics by main components, it was found that the commonality values (Com_{min} = .776; Com_{max} = .996), the 4 items are superior to the extraction criteria (Com = .300). In relation to the total variance explained, a confirmatory analysis was carried out with two factors, explaining 79.95% of the total variance (shown in Appendix B). As for the rotated factorial solution, the Varimax method was used. Table 4 presents information comparing the relative saturations of each indicator for three factors of management perception. The fourth factor was constituted by two indicators and was assigned the name of “employee involvement". The indicator was the following: "There has been consultation with employees on setting the budget” (D1), and “Employees cooperate over budget formulation” (D4). The second factor was constituted by one indicator and was assigned the name of "communication". The indicator was the following: “A budget update is communicated every month” (D3). The third factor was constituted by one indicator and was assigned the name of "involvement". The indicators were the following: “Employees have control over the budget formulation” (D2).

Organizational Performance

The construct of organizational performance was made up of four indicators (E1 to E4). The factorial analysis procedure was used to evaluate the validity of the

Table 4

Rotated Matrix for Budget Participation

Items	Component 1	2	3
There has been consultation with employees on setting the budget.	.922		
Employees have control over the budget formulation.			.932
A budget update is communicated every month.		.922	
Employees cooperate over budget formulation.	.720		

organizational performance construct. In the analysis of the correlation matrix, it was found that the majority of statements have a positive correlation (shown in Appendix B).

Regarding the sample adequacy measure KMO, a value close to the unit (KMO = .643) was found. For the Bartlett sphericity test, it was found that the results (X^2 = 114.093, *df* = 6, *p* = .000) are significant (shown in Appendix B). When analysing the anti-image covariance matrix, it was verified that the values of the main diagonal are greater than zero (greater than .576).

For the extraction statistics by main components, it was found that the commonality values (Com_{min} = .898; Com_{max} = .931), the 4 items are superior to the extraction criteria (*Com* = .300). In relation to the total variance explained, a confirmatory analysis was carried out with two factors, explaining 80.77% of the total variance (shown in Appendix B).

As for the rotated factorial solution, the Varimax method was used. Table 5 presents information comparing the relative saturations of each indicator for two factors of management perception. The first factor was constituted by two indicators and was assigned the name of "liquidity". The indicators were the following: "Over the past three years we have consistently had a current ratio lower than 1" (E1) and "Over the past

three years we have consistently had a working capital lower than 100%" (E2). The second factor was constituted by two indicators and was assigned the name of "borrowing". The indicators were the following: "Over the past three years we have experienced an increased in short term loan portfolio" (E3) and "Over the past three years we have experienced increases in long term loan portfolio" (E4).

Reliability of the Instrument

The instruments were subjected to reliability analysis to determine their internal consistency by obtaining the Cronbach alpha coefficient for each scale. The Cronbach alpha coefficients obtained for the variables are the following: (a) budgetary control, .736, (b) budgetary slack, .660, (c) management perception, .790, (d) budgetary participation, .806, and (e) organizational performance, .748.

All Cronbach's alpha values were considered as corresponding to acceptable reliability measures for each of the variables (see Appendix C).

Table 5

Rotated Matrix for Organizational Performance

Items	Component 1	2
Over the past three years we have consistently had a current ratio lower than 1.		.865
Over the past three years we have consistently had a working capital lower than 100%.		.885
Over the past three years we have experienced an increased in short term loan portfolio.	.876	
Over the past three years we have experienced increases in long term loan portfolio.	.881	

Operationalization of the Variables

Table 6 shows, an example, the operationalization of the budgetary control variable, in which its conceptual definitions are included as instrumental and operational, in the first column the name of the variable can be seen, in the second column, the conceptual definition appears, in the third one, the instrumental definition that specifies how the variable will be observed, and in the last column each variable is codified. The full operationalization is found in Appendix D.

Main Null Hypothesis

H_0: The empirical model, in which budgetary slack, management perception, organizational performance and budget participation are predictors for budgetary control as perceived by senior officers for tertiary education institutions in the Caribbean which does not have an acceptable goodness of fit with the theoretical model.

Operationalization of Null Hypotheses

Table 7 shows the operationalization of one of the null hypotheses.

Data Collection

Questionnaires, in particular, are the most popular instrument in management research and this was used for data collection. In order to collect data from a representative sample, the research was conducted by means of a self-administered online questionnaire, which allowed collection of data for statistical analysis and that may suggest certain relationships of the constructs proposed in the theoretical framework (Saunders et al., 2012).

Table 6

Operationalization of the Variable Budgetary Control

Variables	Conceptual definition	Instrumental definition	Operational definition
Budgetary Control	The process of comparing budgeted plans and standards to actual financial results, analysing variances, and taking corrective action (Bedford, 2015).	The degree of budgetary control used by managers in tertiary education providers in the Caribbean, was determined by means of the following 8 items, under the scale: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree 1. We engage in communication about budgeting once a month. 2. We routinely evaluate the budget. 3. We have experienced budget deficits over the last three years. 4. It is alright for us to delay action towards budget issues. 5. We have experienced actual expenses more than budgeted expenses in the last three years. 6. We have experienced actual income more than budgeted income in the last three years. 7. Over the last three years we have been experiencing financial difficulty. 8. Our administration is concerned about expenditure.	To measure the degree of budgetary control used by managers in tertiary education providers in the Caribbean, was determined by means of the following 8 items. The variable was considered as metric. To make the approach of the conclusions of this study, the following equivalence was determined for the scale used: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree

Table 7

Operationalization of Hypotheses

Hypothesis	Variables	Level of measurement	Statistical test
The empirical model, in which budgetary slack, management perception, organizational performance and budget participation are predictors for budgetary control as perceived by senior officers for tertiary education institutions in the Caribbean which does not have an acceptable goodness of fit with the theoretical model.	Independents A. Management Perceptions B. Budgetary Slack C. Budgetary Participation D. Organizational performance	Metrics Metrics Metrics Metrics	For the analysis of this hypothesis, the statistical technique of multiple linear regression was used by the method of successive steps. The rejection criterion of the null hypothesis was for values of significance $p \leq .05$.

Access to Respondents

With the suggestions and comments received from experts, the questionnaire was developed using Survio, and the author sent the web-link to the relevant personnel within the institutions under study. After two weeks of sending the request, the author checked the response rate and sent reminder emails to the subjects. When the quota was not met within the first month, the author asked his colleagues in Trinidad and in the Caribbean to send email solicitations through their network to people who they knew or have contact with in those institutions. Telephone calls, visits by the author and colleagues together with follow-up reminders were done to ensure that the target to meet the 100 sampling quota within five months was met. The survey was

self-administered online through Survio, and some were completed hard copy and was entered by the researcher into the database.

According to Wright and Ogbbueho (2014, p. 41), “electronic data collection methods have increased in popularity among academic researchers and are perceived as able to deliver results in a cost effective and time efficient manner”. Given that participants of this research were located at various sites across the Caribbean, it was convenient to employ online tools to aid with data collection so that unnecessary time and resources would not have to be expended. A number of researchers indicated that no significant differences exist in responses to surveys and interviews provided over the internet, telephone and paper and pencil for data collection (Knapp & Kirk, 2003; Truell & Goss, 2002).

Data Analysis

The database was formed in the SPSS for Windows in version 20, in order to perform the analysis of the variables in that program. Subsequently, the scores for each of the variables were obtained, following the process indicated in the operationalization of the variables. After having completed the database, descriptive statistics (measures of central tendency, variability, normality and detection of atypical and absent data) were used to clean the database and obtain demographic information, as well as to evaluate the behavior of the main variables.

CHAPTER IV

ANALYSIS OF THE RESULTS

Introduction

This study had, among its objectives, to explore whether the budgetary slack, budgetary participation, management perception and organizational performance are significant predictors of budgetary control, according to the perception of the senior employees of institutions of higher learning in the Caribbean in accordance to the theoretical model identified in chapter one.

The research was considered quantitative, explanatory, transversal, descriptive, exploratory, correlational and field. The predictor variables in this research were budgetary slack, budgetary participation, management perception and organizational performance. The demographic variables were the following: student population, number of full time employees, positive or negative cash flow and highest level of program offered.

The outline of this chapter is as follows: (a) population and sample, (b) demographic description of the subjects, (c) cross tables, (d) arithmetic means, (e) null hypotheses, and (f) summary of the chapter.

Sample

The population that was observed for this research was estimated to be 193 institutions of higher learning in the Caribbean. The research was targeted at the senior officials of these institutions. Data collection was done by the use of a questionnaire.

The field work was conducted during the months of February and August of 2018 and workable feedback was received by 101 respondents which represented 52.3% of the population.

Demographic Description

This section contains the demographic information regarding the subjects for this research. The results presented are for the variables student population, number of full-time employees, positive or negative cash flow and highest level of program offered (statistical tables are shown in Appendix D).

Student Population

As shown in Table 8, it can be observed that 29.7% of the institutions had less than 250 students. There were 32.7% participants who had more than 250 but less than 500 students and this was the mode of the sample. Only 37.6% of the institutions had over 500 students.

Table 8

Distribution of Participants for Student Population

Student Population	*n*	%
0 – 250	30	29.7
251 – 500	33	32.7
501 – above	38	37.6
Total	101	100.0

Number of Full-Time Employees

In Table 9, it can be observed that 71.3% of the institutions had less than 50 full time employees and this was the mode of the sample. There were 21.8% participants who had more than 50 but less than 100 full time employees. Only 6.9% of the institutions had over 100 full time employees.

Table 9

Distribution of Participants for Full-Time Employees

Full-time employees	*n*	%
0 – 50	72	71.3
51 – 100	22	21.8
101 – above	7	6.9
Total	101	100.0

Highest Level of Program Offered

In Table 10, it can be observed that 16.8% of the institutions offered programs below a bachelor's degree while 50.5% offered a bachelor's degree and this was the mode. There were 32.7% institutions offered programs above a bachelor's degree.

Cash Flow

16.5% of the institutions had a negative cash flow while 83.5% had a positive cash flow.

Cross-Tables

In this section, some cross-tables will be presented.

Table 10

Distribution of Participants for Highest Level of Program Offered

Highest level program	*n*	%
Associate Degree	17	16.8
Bachelor's Degree	51	50.5
Master's Degree	30	29.7
Doctoral Degree	3	3.0
Total	101	100.0

Institutional Findings

Number of Students and Full-Time Employees

Institutions with less than 250 students had less than 50 full time employees. Of 33 institutions with more than 250 students but less than 500 students, 32 institutions have less than 50 employees and only one institution had between 51 to 100 employees. Of 15 institutions with more than 500 students and less than 750 students showed that nine of them had less than 50 full time employees, five of them with more than 50 but less than 100 and one of them had full time employees over 101. Of 11 institutions with more than 750 students and less than 1000 students showed that one of them had less than 50 full time employees, nine of them with more than 50 but less than 100 and one of them had full time employees over 100. Institutions with more than 1001 students showed that 0% of them had less than 50 full time employees, seven of them with more than 50 but less than 100 and three of them had full time employees over 100 (as shown in Appendix E).

Number of Students and Highest Level of Programs Offered

It was seen that institutions with less than 250 students, had 13 institutions that offered Associate degrees, 14 institution offered Bachelor's Degrees and three institutions offered Master's degrees. Institutions with less than 500 but more than 251 students showed that three offered Associate degrees, 22 offered Bachelor's Degrees and eight offered Master's degrees. Institutions with less than 750 but more than 501 students show that one institution offered Associate degrees, six offered Bachelor's Degree, seven offered master's degree and one offered a Doctorate. Institutions with less than 1000 but more than 751 students show that five institutions offered Bachelor's Degrees and six offered Master's degrees. Institutions with more than 1001 students but less than 1500 students it shows that four institutions offer Bachelor's Degrees, five offered Master's degree and one Doctorate degree. Finally, it can also be observed that institutions with more than a 1500 students, two institutions only offer master and doctorate programs (as shown in Appendix E).

Number of Employees and Highest Level of Program Offered

It can be seen that institutions with less than 50 employees, of 72 institutions 16 offered Associate degrees, 40 offered Bachelor's Degree, 15 offered Master's degree, and one offered Doctorate degree. Institutions with less than 100 but more than 51 employees show that one institution offered Associate degrees, nine offered Bachelor's Degrees and 12 offered Master's degrees while institutions with more than 101 employees show that two institutions offered Bachelor's Degrees, three offered Master's degrees and two offered Doctorate degrees (as shown in Appendix E).

Full Time Employee and Cash Flow

It can be seen that institutions with less than 50 employees had 16.7% with negative cash flow while 83.3% had a positive cash flow. Institution with more than 50 employees and less than 100, 18.2% had a negative cash flow while 81.8% had a positive cash flow. All institution with more than 100 employees had a positive cash flow. It can also be observed that of the population that 15.8% had a negative cash flow while 84.2% had a positive cash flow (as shown in Appendix E).

Students and Cash Flow

It can be seen that institutions with less than 250 students had 16.7% with negative cash flow while 83.3% had a positive cash flow. Institution with more than 250 students and less than 500, 18.1% had a negative cash flow while 81.9% had a positive cash flow. Institution with more than 500 students and less than 750, 6.7% had a negative cash flow while 93.3% had a positive cash flow. Institution with more than 750 students and less than 1000, 36.4% had a negative cash flow while 63.6% had a positive cash flow. Institution with more than 1000 students had a positive cash flow. It can also be observed that of the population that 15.8% had a negative cash flow while 84.2% had a positive cash flow (as shown in Appendix E).

Arithmetic Means

This section presents the results of the two highest arithmetic means, the two lowest arithmetic means, and the arithmetic mean of each construct.

Budgetary Control

As shown in Table 11, the highest arithmetic means of budgetary control

correspond to the statements “Our administration is concerned about expenditure" (BC8 = 4.23) and " We engage in communication about budgeting once a month" (BC1 = 4.20). The lowest results were “It is alright for us to delay action towards budget issues" (BC4 = 3.52) and “We have experienced actual expenses more than budgeted expenses in the last three years" (BC5 = 3.72). It is observed that participants *agree* with the use of budgetary control (3.93).

Table 11

Mean and Standard Deviation for the Construct Budgetary Control

Declaration	*M*	*SD*
BC8	4.23	.937
BC1	4.20	.990
BC4	3.52	1.188
BC5	3.72	1.305
Total	3.93	.639

Budgetary Slack

The highest arithmetic mean of budgetary slack correspond to the statements “Our departments have met their targets every year over the past three years” (BS4 = 3.24) and “It is easy to meet our income targets” (BS2 = 3.00), while the lowest results were "Our departments tend to request more than what they need" (BS3 = 2.65), and “I doubt that departmental budgets can improve efficiency in the area of responsibility” (BS1 = 2.87). The total arithmetic mean of budgetary control was 2.94 it means that the participants are *uncertain* of the budget slack (see Table 12).

Table 12

Mean and Standard Deviation for the Construct Budgetary Slack

Declaration	*M*	*SD*
BS4	3.24	1.115
BS2	3.00	1.281
BS1	2.87	1.083
BS3	2.65	1.220
Total	2.94	.835

Management Perception

As shown in Table 13, the highest arithmetic means of management perception correspond to the statements “There is a sense of distrust with the organization” (MP3 = 3.45), and “There is doubt among management about job security” (MP2 = 3.39), while the lowest results were “We are expected to achieve unrealistic targets" (MP4 = 2.86), and “There is unfairness in the budgetary allocation” (MP1 = 3.19). The total arithmetic mean of management perception was 3.22, it means that participants are *uncertain* of the management perception.

Table 13

Mean and Standard Deviation for the Construct Management Perception

Declaration	*M*	*SD*
MP3	3.45	1.269
MP2	3.39	1.200
MP1	3.19	1.129
MP4	2.86	1.158
Total	3.22	.930

Budget Participation

As shown in Table 14, the highest arithmetic means of budget participation correspond to the statements "There has been consultation with employees on setting the budget " (BP1= 3.82), “A budget update is communicated every month” (BP = 3.39) and “Employees cooperate over budget formulation” (BP = 3.39) while the lowest result were "Employees have control over the budget formulation" (BP2 = 2.88). The total arithmetic mean of budgetary control was 3.38, it means that participants are *uncertain* of the budget participation.

Table 14

Mean and Standard Deviation for the Construct Budget Participation

Declaration	*M*	*SD*
BP1	3.82	.942
BP3	3.39	1.208
BP4	3.39	1.131
BP2	2.92	1.129
Total	3.22	1.017

Organizational Performance

As shown in Table 15, the highest arithmetic means of organizational performance correspond to the statements "Over the past three years we have consistently had a working capital lower than 100%" (OP2 = 3.58) and “Over the past three years we have consistently had a current ratio lower than 1” (OP1 = 3.56), while the lowest results were "Over the past three years we have experienced increases in long term loan portfolio" (OP3 = 3.06) and “Over the past three years we have experienced increases in

Table 15

Mean and Standard Deviation for the Construct Organizational Performance

Declaration	*M*	*SD*
OP2	3.58	1.492
OP1	3.56	1.539
OP4	3.10	1.171
OP3	3.06	1.147
Total	3.33	1.017

long term loan portfolio" (OP = 3.10). The total arithmetic mean of budgetary control was 3.33, it means that participants are *uncertain* of the organizational performance.

Multiple Regression Assumptions

For this research, the first criterion that was analysed was the linearity through the graphs. The second criterion that was tested was the normality of the errors with the Kolmogorov-Smirnov statistic ($p > .05$). In the third criterion the independence of the errors was proved, using the Durbin-Watson test, whose value is very close to this indicates that the errors are not correlated and are independent. The fourth assumptions analyse was the collinearity of the variables, and it was observed that the factor of the inflation of the variance (VIF) of budgetary slack is 1.000 in model 1 when only use this variable for regression. In Model 2 using budgetary slack is 1.198 and organizational performance is 1.198, thus, results were less than ten for which, it is concluded that the before mention variables do not present collinearity. Finally, the homoscedasticity was analysed, and it was proved that the errors have equal variances (see Appendix F).

Null Hypothesis

In this section, the results from statistical tests of the main null hypothesis for this investigation are presented. The hypothesis was subjected to selected indicators.

The null hypothesis (H_0) states that budgetary slack (BS), management perceptions (MP), organizational performance (OP) and budgetary participation (BP) are not significant predictors of budgetary control (BC), according to the perception of the senior officers of tertiary education institutions in the Caribbean.

For the analysis of this hypothesis, the statistical technique of multiple linear regression was used; budgetary slack, management perceptions, organizational performance and budgetary participation were considered as independent variables budgetary control as a dependent variable.

When applying the method of stepwise in the regression analysis, the variables management perceptions and budgetary participation were deleted from the model and best predictor, was the variable budgetary slack because it explained 31.5% of the variance of the dependent variable budgetary control (see Figure 2, Table 16). Model 1 has a *F* value equal to 46.947 and *p* value equal to .000. As it can be observed that the *p* value is less than .05, therefore, there is a positive and significant lineal correlation. Thus, the null hypothesis is rejected.

It also was observed that the variables budgetary slack and organizational performance (Model 2) were good predictors of the budgetary control variable. The value of R^2 adjusted was equal to .395, which means that these two variables explain 39.5% of variance of the dependent variable budgetary control (see Figure 3, Table 16). Model 2 has a *F* value equal to 33.620 and *p* value equal to .000. As it can be observed that the *p*

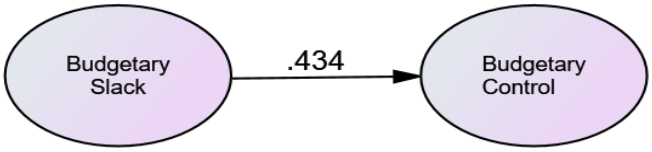


Figure 2. Model 1.

Table 16

Regression Results

Modelo	*R*	*R* squaer	*R* square adjusted
1. Budgetary slack	.567	.322	.315
2. Budgetary slack and organizational performance	.638	.407	.395

value is less than .05, therefore, there is a positive and significant lineal correlation. Thus, the null hypothesis is rejected.

The values of the non-standardizes *Bk* for each model were the following: (a) Model 1 B_0 equal to 2.653, B_1 equal to .434 and (b) Model 2 B_0 equal to .2.278, B_1 equal to .334 and B_2 equal to .201.

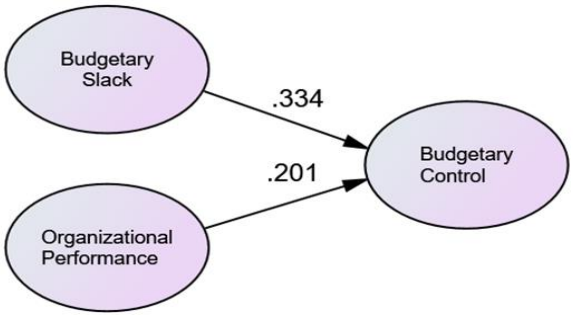


Figure 3. Model 2.

Summary of the Chapter

The purpose of this chapter was to present the results following statistical data analysis. Findings were presented based on each of the variables and hypotheses. In the next chapter, an in-depth discussion of these findings relating to the research question will be presented. The issues, whether new or elaborated, that have emerged from the study will be synthesized in light of the literature and notable current day examples. Additionally, conclusions will be provided to summarize the investigation.

CHAPTER V

CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Introduction

This study explored the causal relationship of budgetary slack, budgetary participation, management perception and organizational performance as significant predictors of budgetary control, according to the before mentioned theoretical foundation. The research was considered empirical, quantitative, explanatory, transversal and descriptive exploratory and field.

The variables were budgetary slack, budgetary participation, management perception and organizational performance, while the dependent variable was budgetary control. The demographic variables were the following: number of students, number of employees, highest level of program offered and cash flow.

The sample that was used in this research was 101 respondents of institutions of higher learning in the Caribbean. The predictor variables in this research were budgetary slack, budgetary participation, management perception and organizational performance, while the criterion variable was budgetary control. For the analysis of the main hypothesis, the statistical technique of multiple linear regression was used.

Discussion

In this section, the results are discussed and answers to the questions and initial objectives of the research by construct are presented.

Budgetary Slack

Merchant (1985) proposed that budgetary slack is the difference between the amount budgeted for an area and that which is necessary. Siegel and Marconi (1989) as the difference between the real resources needed to complete the work effectively with a number of resources that are added to complete the task. It was deemed to refer to budget resources controlled by a manager in excess of optimal to accomplish his or her objectives by Kren (2003). Van der Stede (2000) indicate that business units that either pursue a differentiation strategy or have been more profitable are subject to less rigid budgetary controls, which augment the propensity to build slack as well as the tendency for managers to think long-term.

Consistent with the theorists presented above, the model presented similar findings. Budgetary Slack is a predictor of budgetary control. Therefore, when there is extra capacity in the budget it allows the organization to have better budgetary control.

A look at the arithmetic mean suggested that the majority was uncertain or agreed to the influences of budgetary slack and its outcomes in tertiary education institutions in the Caribbean. This was consistent with the model, suggesting that budgetary slack have an influence on budgetary control.

The items with the three highest scores were: “our departments have met their targets every year over the past three years” and “it is easy to meet our income targets” The first item speaks to if departments have met their targets each year over the past three years. This would indicate that there are slack within the budget since departments generally meet their financial goals. The other item refers to the ease of meeting income targets which like the first one whereby speaks to a degree of ease for budget

holders to meet their targets. The items with the lowest results were "Our departments tend to request more than what they need" and “I doubt that departmental budgets can improve efficiency in the area of responsibility”. The first item speaks about departments requesting more resources that they actually need and the other statement refers to weather the current department budget can improve efficiency within the department. The results show that the institutions under study were neutral in relation to these two variables since the arithmetic means for these two variables were around three.

Budget Participation

Numerous studies also defined budget participation as allowing subordinates to exchange information with supervisors to influence their budget target (Lau & Lim, 2002). Participation means that there is input from the stakeholders directly involved in the process. Lower – level managers do this through their budget estimations, which they then voice to the top-level management. The literature suggests that budgeting targets solely set by top management might be too difficult or too loose. On the contrary, if solely set by subordinates, budgetary slacks could occur and the organization could get disoriented (Chaney et al., 2002). Thus, ideally budgeting control system should be established by all members, top management proposes the visions of organization development, whereas subordinates provide information on daily operation details (Chong & Johnson, 2007). Inconsistent with the theorists presented above, the model did not present similar findings. Budget participation is not a predictor of budgetary control.

A look at the arithmetic mean suggested that the majority was neutral to the influences of budget participation and its outcomes in tertiary education institutions in the Caribbean. This was consistent with the model, suggesting that budget participation

did not have an influence on budgetary control.

The items with the two highest scores were: "there has been consultation with employees on setting the budget" and “a budget update is communicated every month”. The first item speaks to employees being consulted in the budget setting process or during the process and their feedback is valued and included and the second items speaks about budget holders receiving communication about their budget every month. This shows that feedback on their budget is shared regularly. The items with the lowest result were "employees have control over the budget formulation" and “employees co-operate over budget formulation”. These two items speak about the employees having control and corporation over budget formulation. This would mean that they have a lower level of control over the formulation of the budget.

Management Perception

Perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world (Lindsay & Norman, 2013). It refers to the way we all interpret our experiences. The important revelation is that no two people experience and interpret sensations, situations, or their own feelings the same way Otara (2011). Lu (2011) pointed out that budgetary perception refers to an administrator’s general attitude, enthusiasm and rational toward the budgeting practise. This will, in many cases, be influenced by the value administrators place on the budget and their own experiences of it being valuable in realizing success. Nylinder (2009) suggests that perception of budgetary control by managers depended on both their personal characteristics and the financial situation of their departments. Inconsistent with the theorists presented above, the model did not present similar findings. Management perception is

not a predictor of budgetary control.

A look at the arithmetic mean suggested that the majority was neutral to the influences of management perception and its outcomes in tertiary education institutions in the Caribbean. This was consistent with the model, suggesting that management perception did not have an influence on budgetary control.

The items with the highest arithmetic means of management perception correspond to the statements “there is a sense of distrust with the organization” and “there is doubt among management about job security”. While the lowest results were “we are expected to achieve unrealistic targets" and “there is unfairness in the budgetary allocation” since the mean of the all the statements were close to the neutral point of the scale it would suggest that there the senior officials were uncertain in relation to the variables.

Organizational Performance

Definitions include that organizational performance refers to how well the company is doing relative to other companies as perceived by budget supervisors (Van der Stede, 2000). Epstein and McFarlan (2011) carried out a study on measuring efficiency and effectiveness of a non-profit’s performance and found that budgetary control was one of the important tools in achieving efficiency for non-profit organizations. Brownell (1981) found that budgeting control system has a direct and positive effect on organizational performance. Consistent with the theorists presented above, the model presented similar findings. Organizational performance is a predictor of budgetary control. Therefore, when there is better organizational performance it allows the organization to have better budgetary control.

A look at the arithmetic mean suggested that the majority agreed to the influences of organizational performance and its outcomes in tertiary education institutions in the Caribbean. This was consistent with the model, suggesting that organizational performance did not have an influence on budgetary control.

The items with the highest arithmetic means of organizational performance correspond to the statements "over the past three years we have consistently had a working capital lower than 100%" and “over the past three years we have consistently had a current ratio lower than 1”. These two statements refer to the institutions liquidity position and it shows that they have met best practice standard and is operating in a favourable position. The items with the lowest results were "over the past three years we have experienced increases in long term loan portfolio" and “over the past three years we have experienced increases in long term loan portfolio”. These two items speak about the loans of the institution both short term and long term borrowings.

Budgetary Control

Olurankinse (2013) states that a budget is a vital instrument in governance just as blood is vital to life. Others authors stated that it is because having a proper budgetary control system allows companies to improve their managerial attitude and performance of the organisations, and provides organisations with useful information. Boquist (2001), Dyson (2001), and Mehta and Sinhgad (2014) that controlling budgets were mainly perceived positively in terms of setting standards, measuring the current performance and matching it against the standards and, where necessary and taking remedial action.

A look at the arithmetic mean suggested that the majority agreed to the factors

that determine budgetary control. This was consistent with the model, suggesting that management perception did not have an influence on budgetary control.

The items with the highest arithmetic means of budgetary control correspond to the statements “our administration is concerned about expenditure" and "we engage in communication about budgeting once a month". These two statements relate to the administration showing concerns about expenditure with the institutions and the level of communication and how often it is communicated to budget holders. The items with the lowest results were "it is alright for us to delay action towards budget issues." and "we have experienced actual expenses more than budgeted expenses in the last three years". The first statements talk about action that must be taken to address issues and the second item refers to the institution spending more that what was budgeted.

Conclusions

This section provided the conclusions documented for this paper. It includes conclusions made on arithmetic mean with cross-tables and null hypothesis.

Arithmetic Means

This section shows the conclusions regarding the arithmetic means.

Budgetary Control

The highest arithmetic means of budgetary control correspond to the statements that shows that administration is concerned about expenditure and engage in budget communication at least one a month. While the lower results were that it was alright to delay action towards budget issues and that actual expenses were more than budgeted expenses over the last three years. The total arithmetic mean for the variable was 3.91

and it means that the senior employees perceive in an uncertain and agree with the fulfilment of budgetary control.

Contingency tables were made where the number of employees were analysed, since it plays with the budgetary control construct it was observed that all institutions, dispute the number of full-time employees perceive budgetary control in a very similar way.

Budgetary Slack

The highest arithmetic means of budgetary slack correspond to the statements that shows that our departments have met their targets every year over the past three years. While the lower results were our departments tend to request more than what they need. The total arithmetic mean for the variable was 2.92 and it means that the senior employees perceive an uncertain to the fulfilment of budgetary slack.

Contingency tables were made where the number of employees were analysed, since it plays with the budgetary slack construct it was observed that all institutions dispute the number of full-time employees perceive budgetary slack in a very similar way.

Management Perception

The highest arithmetic means of management perception correspond to the statements that shows that there is a sense of distrust with the organization. While the lower results were “We are expected to achieve unrealistic targets”. The total arithmetic mean for the variable was 3.15 and it means that the senior employees perceive an *uncertainty* with the fulfilment of Management Perception.

Contingency tables were made where the number of employees were analysed, since it plays with the management perception construct it was observed that

all institutions dispute the number of full-time employees perceive management perception in a very similar way.

Budget Participation

The highest arithmetic means of budget participation correspond to the statements that shows that “There has been consultation with employees on setting the budget”. While the lower results were “Employees have control over the budget formulation”. The total arithmetic mean for the variable was 3.36 and it means that the senior employees perceive uncertainty with the fulfilment of budget participation.

Contingency tables were made where the number of employees were analysed, since it plays with the budget participation construct it was observed that all institutions dispute the number of full-time employees perceive budget participation in a very similar way.

Organizational Performance

The highest arithmetic means of organizational performance correspond to the statements that shows that “Over the past three years we have consistently had a working capital lower than 100%.” While the lower results were “Over the past three years we have experienced an increased in short term loan portfolio”. The total arithmetic mean for the variable was 3.26 and it means that the senior employees perceive uncertainty with the fulfilment of organizational performance.

Contingency tables were made where the number of employees were analysed, since it plays with the organizational performance construct it was observed that all institutions dispute the number of full-time employees perceive budgetary slack in a

very similar way.

Null Hypothesis

The results of the main hypothesis are described below.

The main hypothesis states that budgetary slack, management perceptions, organizational performance and budgetary participation are significant predictors of budgetary control, according to the perception of the senior officers of tertiary education institutions in the Caribbean.

It was found that that budgetary slack and organizational performance are good predictors of budgetary control. When evaluating the influence of independent constructs through the standardized beta coefficients, it was found that the best predictor is budgetary slack, followed by organizational performance, but the budget participation and management perception were not significant.

Recommendations

The results of the investigation lead to some recommendations:

1. That administration review and manage an appropriate and acceptable level of budgetary slack within the institution.

2. That administration review the income targets set by the institution to ensure that it is not easily attained. Therefore, extra effort and resources can be directed to improving income level of the institution. There should also be a realisation of income to cash inflow.

3. The administration ensure that departments are sufficiently funded to ensure that efficiency can be attained. For example, investments in information technology

both hardware and software.

4. That administration improves any issue of doubt and job security of employees with their institution. This would affect employee's motivation and if improved can improve employee's efficiency and effectiveness.

5. That administration reviews their loan portfolio since increase in short and long term loan would have a positive impact on short term liquidity but this can affect sustainability in the medium and longer term if obligations are not met.

For Future Research

This section presents some recommendations for future research to find models that contribute to improving budgetary control.

1. Replicate the research, using other populations to compare the results of this investigation. For example, SME's in Trinidad and Tobago or the Caribbean.

2. Formulate new models, where new constructs are contemplated to measure budgetary control.

3. Replicate the research, using other populations in tertiary education institutions to compare the results of this investigation. For example, supervisors in various departments within the institution.

APPENDIX A

INSTRUMENT

Dear Sir/Madam,

Greetings! I am a postgraduate student at Montemorelos University reading for a Doctor of Philosophy in Business Administration. I am writing to ask for your assistance in a study exploring budgetary control at tertiary level institutions in the Caribbean. Your responses are important in order to have complete and useful data on the project as well as contributing to the larger goal of adding literature in this field in the Caribbean and identifying issues faced by tertiary institutions that may affect them to meet their financial targets through budgetary control.

Data collection involves completion of a survey. There are no anticipated risks, compensation or other direct benefits to you as a participant in this research. Please note that any information you provide will be used solely for the purpose of this research and will remain confidential. A copy of the results summary will be available upon request.

Please follow the link below to complete the questionnaire.

Link to questionnaire: https://www.survio.com/survey/d/U8S8N2J0K9B6H3R8G

If you have questions or concerns, please feel free to contact me at (868) 470-3885 or p_ramoutar@hotmail.com. Thank you in advance for your time and participation.

Sincerely,

Prakash Ramoutar, Postgraduate student
Montemorelos University

BUDGETARY CONTROL SURVEY

Directions

Please tick the responses conforming to your situation freely. There are no differentiations into correct or incorrect responses, all responses will be treated confidentially and will in no way be traceable to you. Thank you for your assistance in this research study.

Please tick the appropriate box or fill in the responses below.	
1. Student population: _____	2. Number of fulltime employees: _____
3. Net cash flow for 2016 Positive [ ] Negative [ ]	4. Highest program offered: [ ] Certificate [ ] Associate degree [ ] Bachelor degree [ ] Masters [ ] Doctorate

1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly agree	**1**	**2**	**3**	**4**	**5**
5. We engage in communication about budgeting once a month.					
6. We routinely evaluate the budget.					
7. We have experienced budget deficits over the last three years.					
8. It is alright for us to delay action towards budget issues.					
9. We have experienced actual expenses more than budgeted expenses in the last three years.					
10. We have experienced actual income more than budgeted income in the last three years.					
11. Over the last three years we have been experiencing financial difficulty.					
12. Our administration is concerned about expenditure.					
13. We have experienced decrease in productivity over the last three years.					
14. I doubt that departmental budgets can improve efficiency in the area of responsibility.					
15. It is easy to meet our income targets.					
16. Our departments tend to request more than what they need.					

17. Our departments usually source for the best prices.					
18. Our departments have met their targets every year over the past three years.					
19. We allow our employees to have input in the creation of their budget.					
20. Our administration tends to perceive that the budget is unrealistic.					
21. There is unfairness in the budgetary allocation.					
1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly agree	**1**	**2**	**3**	**4**	**5**
22. There is doubt among management about job security.					
23. Consequences for negative results are fair.					
24. There is a sense of distrust with the organization.					
25. We are expected to achieve unrealistic targets.					
26. Our budget allocation gives the required quality.					
27. I am satisfied dealing with financial issues.					
28. Management is satisfied with the direction the organization is going.					
29. There has been consultation with employees on setting the budget.					
30. There is a team formed to solve budgeting matters.					
31. Over the last three years, we experienced the budget being shared in an untimely manner after approval.					
32. The budget was vaguely understood by employees.					
33. Employee disconnect in the budget setting process.					
34. Employees have control over the budget formulation.					
35. A budget update is communicated every month.					
36. Employees cooperate over budget formulation.					
37. We have been achieving organizational goals.					
38. Over the past three years we have consistently had a current ratio lower than 1					
39. Over the past three years we have consistently had a working capital lower than 100%					
40. Over the past three years we have consistently experienced growth in enrollment					
41. Over the past three years we have experienced surplus.					

42. Over the past three years we have experienced an increased in short term loan portfolio.					
43. Over the past three years we have experienced increases in long term loan portfolio.					
44. We have engaged in institution investment portfolio over the last three years.					

-End of Survey-

APPENDIX B

FACTORIAL ANALYSIS

Budgetary Control

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.762
Bartlett's Test of Sphericity	Approx. Chi-Square	109.301
	Df	28
	Sig.	.000

Communalities

	Initial	Extraction
We engage in communication about budgeting once a month	1.000	.446
We routinely evaluate the budget	1.000	.528
We have experienced budget deficits over the last three years	1.000	.487
It is alright for us to delay action towards budget issues.	1.000	.540
We have experienced actual expenses more than budgeted expenses in the last three years	1.000	.595
We have experienced actual income more than budgeted income in the last three years.	1.000	.310
Over the last three years we have been experiencing financial difficulty	1.000	.485
Our administration is concerned about expenditure	1.000	.424

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.593	32.417	32.417	2.593	32.417	32.417
2	1.222	15.273	47.690	1.222	15.273	47.690
3	.918	11.473	59.163			
4	.794	9.931	69.094			
5	.731	9.135	78.229			
6	.661	8.261	86.491			
7	.598	7.475	93.966			
8	.483	6.034	100.000			

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
We engage in communication about budgeting once a month	.111	.779	
We routinely evaluate the budget		.744	.138
We have experienced budget deficits over the last three years	.673		.176
It is alright for us to delay action towards budget issues.	.634		.438
We have experienced actual expenses more than budgeted expenses in the last three years	.779	.153	
We have experienced actual income more than budgeted income in the last three years.		.129	.914
Over the last three years we have been experiencing financial difficulty	.724		
Our administration is concerned about expenditure	.204	.519	.338

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Budgetary Slack

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.648
Bartlett's Test of Sphericity	Approx. Chi-Square	77.827
	Df	6
	Sig.	.000

Communalities

	Initial	Extraction
I doubt that departmental budgets can improve efficiency in the area of responsibility	1.000	.993
It is easy to meet our income targets	1.000	.824
Our departments tend to request more than what they need	1.000	.981
Our departments have met their targets every year over the past three years	1.000	.824

Extraction Method: Principal Component Analysis.

Com-po-nent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Vari-ance	Cumu-lative %	Total	% of Vari-ance	Cumu-lative %	Total	% of Vari-ance	Cumu-lative %
1	2.069	51.731	51.731	2.069	51.731	51.731	1.543	38.578	38.578
2	.939	23.486	75.217	.939	23.486	75.217	1.047	26.177	64.755
3	.612	15.295	90.512	.612	15.295	90.512	1.030	25.757	90.512
4	.380	9.488	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
I doubt that depart-mental budgets can improve efficiency in the area of responsi-bility	.245		.964
It is easy to meet our income targets	.853	.289	.111
Our departments tend to request more than what they need	.136	.980	
Our departments have met their tar-gets every year over the past three years	.858		.294

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normaliza-tion.
a. Rotation converged in 5 iterations.

Management Perception

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.732
Bartlett's Test of Sphericity	Approx. Chi-Square	124.715
	Df	6
	Sig.	.000

Communalities

	Initial	Extraction
There is unfairness in the budgetary allocation	1.000	.860
There is doubt among management about job security	1.000	.996
There is a sense of distrust with the organization	1.000	.842
We are expected to achieve unrealistic targets	1.000	.979

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.456	61.395	61.395	2.456	61.395	61.395	1.589	39.734	39.734
2	.754	18.849	80.244	.754	18.849	80.244	1.079	26.977	66.712
3	.467	11.675	91.919	.467	11.675	91.919	1.008	25.208	91.919
4	.323	8.081	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
There is unfairness in the budgetary allocation	.875		.306
There is doubt among management about job security	.331	.208	.918
There is a sense of distrust with the organization	.829	.338	.201
We are expected to achieve unrealistic targets	.163	.960	.177

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 4 iterations.

Budget Participation

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.782
Bartlett's Test of Sphericity	Approx. Chi-Square	137.607
	Df	6
	Sig.	.000

Communalities

	Initial	Extraction
There has been consultation with employees on setting the budget	1.000	.901
Employees have control over the budget formulation	1.000	.996
A budget update is communicated every month	1.000	.981
Employees cooperate over budget formulation	1.000	.776

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.601	65.025	65.025	2.601	65.025	65.025	1.497	37.436	37.436
2	.597	14.926	79.951	.597	14.926	79.951	1.100	27.500	64.936
3	.456	11.398	91.350	.456	11.398	91.350	1.057	26.413	91.350
4	.346	8.650	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
There has been consultation with employees on setting the budget	.787		
Employees have control over the budget formulation	.781	.425	.454
A budget update is communicated every month	.799	.317	
Employees cooperate over budget formulation	.857		

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

Organizational Performance

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.643
Bartlett's Test of Sphericity	Approx. Chi-Square	114.093
	Df	6
	Sig.	.000

Communalities

	Initial	Extraction
Over the past three years we have consistently had a current ratio lower than 1	1.000	.921
Over the past three years we have consistently had a working capital lower than 100%	1.000	.931
Over the past three years we have experienced an increased in short term loan portfolio	1.000	.898
Over the past three years we have experienced increases in long term loan portfolio	1.000	.912

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.303	57.568	57.568	2.303	57.568	57.568	1.555	38.872	38.872
2	.928	23.204	80.771	.928	23.204	80.771	1.088	27.200	66.072
3	.431	10.768	91.539	.431	10.768	91.539	1.019	25.467	91.539
4	.338	8.461	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
Over the past three years we have consistently had a current ratio lower than 1	.767	.457	
Over the past three years we have consistently had a working capital lower than 100%	.743	.510	.345
Over the past three years we have experienced an increased in short term loan portfolio	.768		
Over the past three years we have experienced increases in long term loan portfolio	.757		.317

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

APPENDIX C

ANALYSIS OF RELIABILITY

Budgetary Control

Case Processing Summary

		N	%
Cases	Valid	101	100.0
	Excluded[a]	0	.0
	Total	101	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.695	8

Budgetary Slack

Case Processing Summary

		N	%
Cases	Valid	101	100.0
	Excluded[a]	0	.0
	Total	101	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.671	4

Management Perception

Case Processing Summary

		N	%
Cases	Valid	101	100.0
	Excluded[a]	0	.0
	Total	101	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.787	4

Budget Participation

Case Processing Summary

		N	%
Cases	Valid	101	100.0
	Excluded[a]	0	.0
	Total	101	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.818	4

Organizational Performance

Case Processing Summary

		N	%
Cases	Valid	101	100.0
	Excluded[a]	0	.0
	Total	101	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.748	4

APPENDIX D

OPERATIONALIZATION OF VARIABLES

Operationalization of the demographic variables

Variables	Conceptual Definition	Instrumental	Operational Definition
Number of students	The number of students in relation to the size of the institution	The variable was determined by the response seen under the item: Number of students	The data was classified into the following categories: 1 = 0-250, 2 = 251-500, 3 = 501-750, 4 = 751-1000, 5 = 1001-1500, 6 = 1500-above. The scale of measurement is metric.
Number of full-time employees	The relative size of the institution based on the amount of employees.	The variable was determined by the response seen under the item: Number of full time employees.	The data was classified into the following categories: 1 = 0-50, 2 = 51-100, 3 = 101-above. The scale of measurement is metric.
Highest level of program offered	The relative size of the institution based on the highest level of program offered	The variable was determined by the response seen under the item: Highest level of program offered.	The data was classified into the following categories: 1 = Associate degree, 2 = Bachelor's degree, 3 = Master's degree, 4 = Doctoral Degree. The scale of measurement is nominal.
Cash Flow	The relative cash flow for the organization.	The variable was determined by the response seen under the item: Cash Flow.	The data was classified into the following categories: 0 = Negative, 1 = Positive. The scale of measurement is nominal.

Operationalization of the variable budgetary slack

Variables	Conceptual Definition	Instrumental Definition	Operational Definition
Budgetary Slack	It is defined as the amount by which a subordinate understates his productive capability when given a chance to select a work standard against which his performance will be evaluated with a deliberate incorporation of excess resources in the budget that make the budget easier to attain.	The degree of budgetary slack created by managers in tertiary education providers in the Caribbean, was determined by means of the following 4 items, under the scale: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree 1. I doubt that departmental budgets can improve efficiency in the area of responsibility 2. It is easy to meet our income targets. 3. Our departments tend to request more than what they need 4. Our departments have met their targets every year over the past three years.	To measure the degree of budgetary slack created by managers in tertiary education providers in the Caribbean, was determined by means of the 4 items. The variable was considered as metric. To make the approach of the conclusions of this study, the following equivalence was determined for the scale used: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree

Operationalization of the variable Management Perception

Variables	Conceptual Definition	Instrumental Definition	Operational Definition
Management Perception	It is defined as the is defined as the general attitude that management has in relation to budgetary control.	The degree of Management Perception by managers in tertiary education providers in the Caribbean, was determined by means of the following 4 items, under the scale: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree 1. There is unfairness in the budgetary allocation 2. There is doubt among management about job security 3. There is a sense of distrust with the organization 4. We are expected to achieve unrealistic targets	To measure the degree of Management Perception by managers in tertiary education providers in the Caribbean, was determined by means of the 4 items. The variable was considered as metric. To make the approach of the conclusions of this study, the following equivalence was determined for the scale used: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree

Operationalization of the variable Budget Participation

Variables	Conceptual Definition	Instrumental Definition	Operational Definition
Budget Participation	It is defined as a process in which the budget holder is involved in the preparation of their budget and some of their recommendations are included in the final approved budget.	The degree of participation by employees in the budget process in tertiary education providers in the Caribbean, was determined by means of the following 4 items, under the scale: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree 1. There has been consultation with employees on setting the budget 2. Employees have control over the budget formulation 3. A budget update is communicated every month 4. Employees cooperate over budget formulation	To measure the degree of participation by employees in the budget process in tertiary education providers in the Caribbean, was determined by means of the 4 items. The variable was considered as metric. To make the approach of the conclusions of this study, the following equivalence was determined for the scale used: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree

Operationalization of the variable Organizational Performance

Variables	Conceptual Definition	Instrumental Definition	Operational Definition
Organizational Performance	It is defined as the performance of an organization relative to other organizations based on its financial performance.	The degree of organizational performance in tertiary education providers in the Caribbean, was determined by means of the following 4 items, under the scale: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree 1. Over the past three years we have consistently had a current ratio lower than 1 2. Over the past three years we have consistently had a working capital lower than 100% 3. Over the past three years we have experienced an increased in short term loan portfolio 4. Over the past three years we have experienced increases in long term loan portfolio	To measure the degree of organizational performance in tertiary education providers in the Caribbean, was determined by means of the 4 items. The variable was considered as metric. To make the approach of the conclusions of this study, the following equivalence was determined for the scale used: 1 = Strongly disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree

APPENDIX E

STATISTICS OF DEMOGRAPHIC DATA

Employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 – 50	72	71.3	71.3	71.3
	51 – 100	22	21.8	21.8	93.1
	101 - above	7	6.9	6.9	100.0
	Total	101	100.0	100.0	

Cash Flow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative	16	15.8	15.8	15.8
	Positive	85	84.2	84.2	100.0
	Total	101	100.0	100.0	

Degree Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Associate Degree	17	16.8	16.8	16.8
	Bachelors Degree	51	50.5	50.5	67.3
	Masters Degree	30	29.7	29.7	97.0
	Doctorate Degree	3	3.0	3.0	100.0
	Total	101	100.0	100.0	

APPENDIX F

CROSS TABULATIONS

Students * Employees Crosstabulation

Count

		Employees			Total
		0 - 50	51 - 100	101 - above	
Students	0 – 250	30	0	0	30
	251 - 500	32	1	0	33
	501 - 750	9	5	1	15
	751 - 1000	1	9	1	11
	1001 - 1500	0	7	3	10
	1500 - above	0	0	2	2
Total		72	22	7	101

Students * Degree Level Crosstabulation

Count

		Degree Level				Total
		Associate Degree	Bachelors Degree	Masters Degree	Doctorate Degree	
Students	0 – 250	13	14	3	0	30
	251 - 500	3	22	8	0	33
	501 - 750	1	6	7	1	15
	751 - 1000	0	5	6	0	11
	1001 - 1500	0	4	5	1	10
	1500 – above	0	0	1	1	2
Total		17	51	30	3	101

Employees * Degree Level Crosstabulation

Count

		Degree Level				Total
		Associate Degree	Bachelors Degree	Masters Degree	Doctorate Degree	
Employees	0 – 50	16	40	15	1	72
	51 - 100	1	9	12	0	22
	101 – above	0	2	3	2	7
Total		17	51	30	3	101

Employees * Cash Flow Crosstabulation

Count

		Cash Flow		Total
		Negative	Positive	
Employees	0 - 50	12	60	72
	51 - 100	4	18	22
	101 - above	0	7	7
Total		16	85	101

Students * Cash Flow Crosstabulation

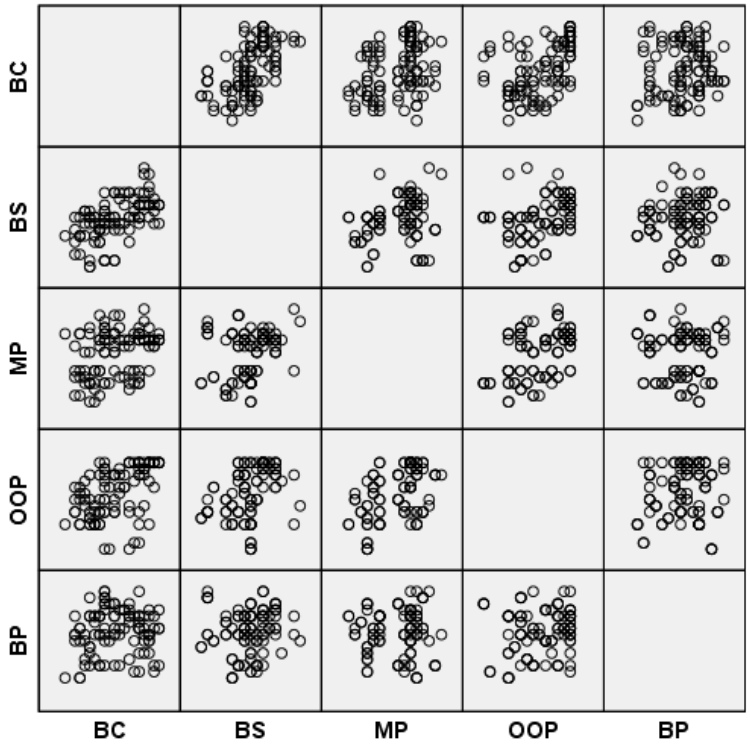
Count

		Cash Flow		Total
		Negative	Positive	
Students	0 - 250	5	25	30
	251 - 500	6	27	33
	501 - 750	1	14	15
	751 - 1000	4	7	11
	1001 - 1500	0	10	10
	1500 - above	0	2	2
Total		16	85	101

APPENDIX G

MULTIPLE REGRESSION ASSUMPTIONS

1.Test of linearity through the graphs



2.Test for normality of the errors with the Kolmogorov-Smirnov statistic (p> .05)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Standardized Residual	.069	101	.200*	.978	101	.082

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

3.Durbin Watson

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.567[a]	.322	.315	.52868	
2	.638[b]	.407	.395	.49686	1.798

a. Predictors: (Constant), BS

b. Predictors: (Constant), BS, OOP

c. Dependent Variable: BC

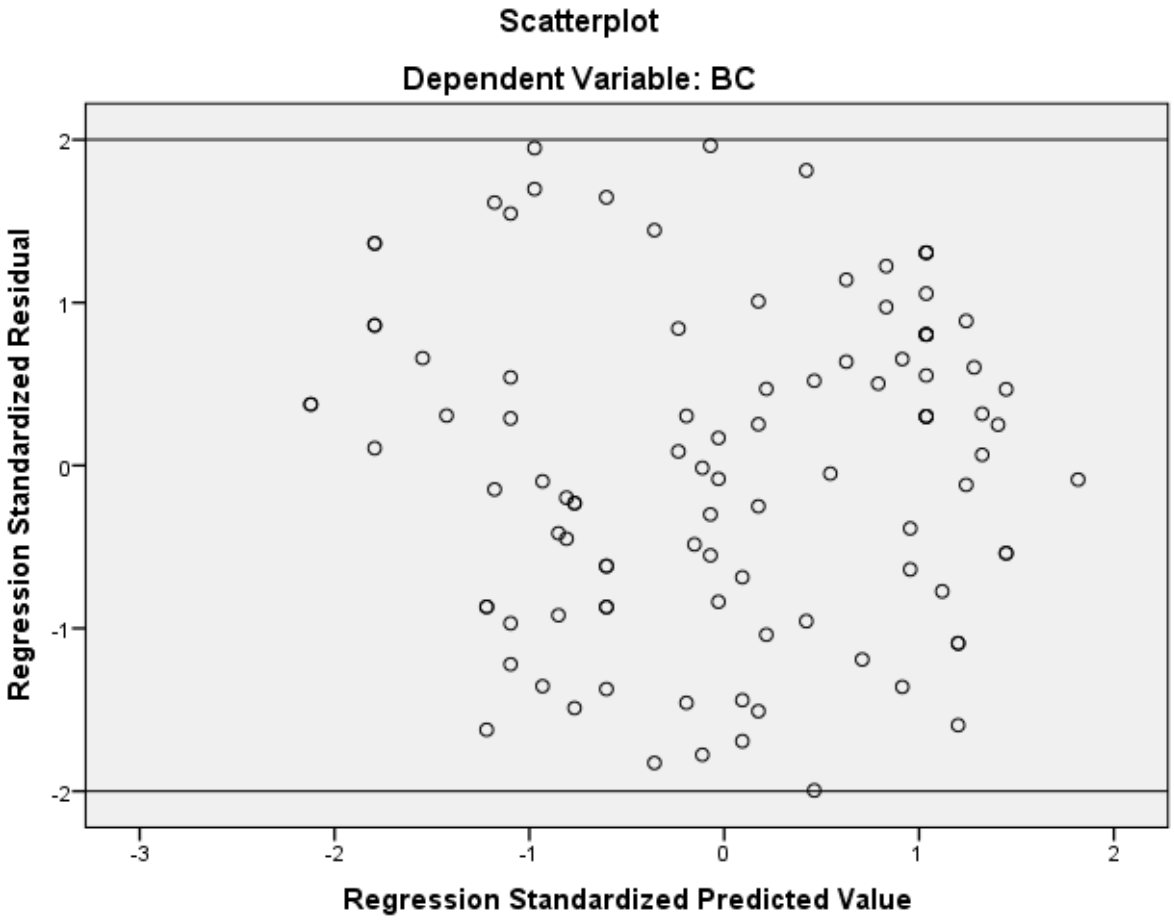
4. The factor of the inflation of the variance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.653	.193		13.717	.000		
	BS	.434	.063	.567	6.852	.000	1.000	1.000
2	(Constant)	2.278	.207		10.984	.000		
	BS	.334	.065	.437	5.133	.000	.835	1.198
	OOP	.201	.053	.320	3.753	.000	.835	1.198

a. Dependent Variable: BC

5.Homoscedasticity



APPENDIX H

NULL HYPOTHESYS ANALYSIS

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.567[a]	.322	.315	.52868	
2	.638[b]	.407	.395	.49686	1.798

a. Predictors: (Constant), BS

b. Predictors: (Constant), BS, OOP

c. Dependent Variable: BC

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.122	1	13.122	46.947	.000[b]
	Residual	27.670	99	.279		
	Total	40.792	100			
2	Regression	16.599	2	8.300	33.620	.000[c]
	Residual	24.193	98	.247		
	Total	40.792	100			

a. Dependent Variable: BC

b. Predictors: (Constant), BS

c. Predictors: (Constant), BS, OOP

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.653	.193		13.717	.000
	BS	.434	.063	.567	6.852	.000
2	(Constant)	2.278	.207		10.984	.000
	BS	.334	.065	.437	5.133	.000
	OOP	.201	.053	.320	3.753	.000

a. Dependent Variable: BC

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CURRÍCULUM VITAE

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Education

- 2019 PhD Business Administration
  Montemorelos University
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- 2015 Post Graduate Certificate in Business Research Methods
  Heriot-Watt University, UK
- 2012 Master of Business Administration in Finance and Accounting
  University of the Southern Caribbean, Trinidad
- 2008 BSc (Hons) Applied Accounting
  Oxford Brookes University, UK

Professional Qualifications

- 2016 Professional Certificate Anti-Money Laundering, Countering the Financing of Terrorism and Financial Crimes Prevention
  Money Laundering and Financial Crime Institute, USA

- 2015 Certified Fraud Examiner (CFE)
  Association of Certified Fraud Examiners, USA

- 2014 Certified Internal Auditor (CIA) Qualification
  Institute of Internal Auditors (IIA), USA

- 2012 Association of Chartered Certified Accountants (ACCA)
  United Kingdom

Appointments
Caribbean Examinations Council:
2010- 2019 Assistant Chief Examiner: Principles of Accounting

Professional Experience

Vice President Financial Administration — July 2015 to present
University of the Southern Caribbean – Maracas St Joseph
Chief Accountant/Financial Controller — March 2015 to June 2015
University of the Southern Caribbean – Maracas St Joseph
Internal Auditor — January 2014 to February 2015

University of the Southern Caribbean – Maracas St Joseph
Accountant January 2009 to December 2013 *University of the Southern Caribbean – Maracas St Joseph*
Accounts Manager January 2008 to December 2008
Premier Customs Brokerage Ltd.
Teaching Experience:

University of the West Indies Open Campus
From 2013 - 2017: Advanced Accounting
From 2012 - 2016: Advanced Managerial Accounting: *Accounting Theory*
From 2012 - 2015: Introduction to Cost and Managerial Accounting

Adjunct Faculty: University of the Southern Caribbean July, 2015 – Dec. 2016
Special topics in Auditing
Lecturer: School of Higher Education July 2012- Dec. 2014
Courses: Managerial Accounting (ABE), Financial Accounting (ABE), Business Environment (ABE), Introduction to Accounting (Heriot-Watt University) Financial Reporting (Heriot-Watt University)

Specialized Training:
Andrews University – International Internal Audit training (November 2013)
Price Waterhouse Coopers (PwC) - Internal Audit training (July-August 2013)
Managing and Facilitating Online Instruction - UWI Open Campus in collaboration with VU for Small States of the Commonwealth (September 2013)

Conferences:
Association of Colleges and University Auditors (September 2013) Virginia, USA
Segment Leadership Development (July 2018) Miami, USA
Caribbean Research Methodologies (September 2018) Trinidad and Tobago, WI
UCLA CMED Conference - Enriching the Middle East's Economic Future (October 2018) Doha, Qatar

Memberships:

- Association of Chartered Certified Accountants (ACCA)
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- Money Laundering and Financial Crime (MLFC)
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