

**INFLUENCE OF INSTITUTIONAL AND CONTINGENCY FACTORS
ON MANAGERIAL DYSFUNCTIONAL BEHAVIOUR OUTCOME OF
MANAGEMENT CONTROL SYSTEMS IN NIGERIAN COMPANIES**

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CERTIFICATION

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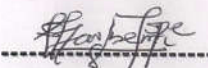
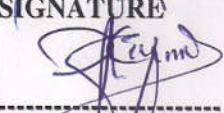
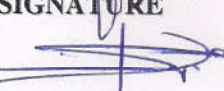
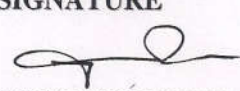
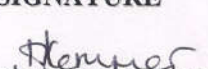
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Submitted to the
School of Postgraduate Studies
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By:

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DEDICATION

This research work is dedicated to
the honour and glory of my Creator;
the Almighty Father and Giver of Life
and to
Adetutumi, my very loving wife;
my sons, Temitayo and Temidayo.

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ABSTRACT

The various findings on the consequences of management control systems (MCS) have been inconsistent and inconclusive; with MCS research generally biased towards the positive consequences of MCS, such as performance, satisfaction, or motivation. Negative behavioural consequences have been, in comparison, less considered empirically. This study provides empirical evidence on the relationship between MCS and managerial dysfunctional behaviour (MDB) in quoted companies in Nigeria. In order to achieve this aim, a model was proposed based on agency, contingency and institutional theories with a view to examining their influence on the MCS-MDB relationship. The model incorporated budget participation (BP), budget emphasis (BE), standard operating procedures (SOP) and Non-financial measures (NFM) as variables representing MCS while gaming and information manipulation were proposed as variables representing negative behavioural consequences of the control systems. The model was tested by means of data collected from a questionnaire survey of three hundred and eleven managers of selected quoted companies on the Nigerian Stock Exchange. The data were analysed using correlation analysis, regression and independent samples t-tests. Findings suggested that BP has a statistically significant influence on the behaviours exhibited by managers ($r = 0.674$, $R^2 = 0.454$, $p < 0.05$). Similarly, the study noted that there is a difference in the level of dysfunctional behaviour of managers depending on the level of BE ($t(309) = -5.885$, $p < 0.05$). However, the study provided no support for significant influence of SOP and NFM on MDB ($r = 0.042$, $p > 0.05$; $r = 0.079$, $p > 0.05$). Findings from the study revealed that managers operating in relatively uncertain environments and who are under pressure from their external environment were significantly more likely to engage in MDB ($R^2 = 0.58$, $\Delta F = 9.435$, Sig. $\Delta F = 0.002$). Evidences also suggest that business unit strategy and institutional pressure moderate the relationship between MCS and MDB ($R^2 = 0.57$, $\Delta F = 116.573$, Sig. $\Delta F < 0.05$; $R^2 = 0.57$, $\Delta F = 125.415$, Sig. $\Delta F = 0.000$). Designers of MCS are encouraged to give adequate consideration to the choice and combination of MCS to be used within the organisation. Deterrent measures should be taken when managers are found to have engaged in managerial dysfunctional behaviour. This study contributes to literature by providing an analytical framework for studying MCS-MDB relationship in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Recurring concerns have been expressed around the world by academics, managers, stakeholders and corporate regulators that there is the need to constantly improve on the control needs of an organisation. Nixon and Burns (2005) suggested that urgent improvement is needed in the area of management control in order to enhance organisational performance in the twenty-first century. Furthermore, the studies of Andon, Baxter, and Chua (2003); Chenhall (2003); Hartman and Vaassen (2003); Manzoni (2002) have shown that the control needs of the current environment are significantly different from those developed in an earlier period and that there is the need for a better understanding of management control systems (MCS). This call is based on the recurrent changes in the business environment, organisational parameters and strategic challenges.

The changes in the control environment in the 1980s through the later part of the 1990s gave rise to deregulation, the emergence of powerful developing economies like China, India and Brazil and the spread of new technologies, especially digitisation of information, electronic surveillance and the internet (Evans & Wurster, 2000; Lawrence, Morse & Fowler, 2005). All these change drivers are transforming the competitive landscape (Nixon & Burns, 2005). In addition, a series of high profile corporate collapses and scandals have exposed weaknesses in both external regulation and organisational controls. These weaknesses have led to increased regulatory actions such as the Cadbury and Turnbull reports in the UK, the 2002 Sarbanes-Oxley Act in the US (Bruce, 2005) and Code of Best Practices on Corporate Governance in Nigeria (Dabor & Adeyemi, 2009). Prior studies including Larker, Richardson & Tuna (2005); McDonough, (2002)

have shown that these changes in control mechanisms are aimed at strengthening regulatory supervision, corporate governance and accountability.

Management control systems (MCS) have been identified as an important part of the management process, critical to the attainment of organisational goals and objectives (International Federation of Accountants [IFAC], 1998). The definition of MCS have evolved over the years from one focusing on the provision of more formal, financially quantifiable information to assist managerial decision making; to one that embraces a much broader scope of information (Chenhall, 2003). Chenhall (2007) suggested that this includes “external information related to markets, customers, competitors, non-financial information related to production processes, predictive information and a broad array of decision support mechanisms, and informal personal and social controls” (p. 165). Anthony (1988, as cited in Cuguro & Rosanas, 2011, p. 3) defined management control as “the process by which managers influence other members of the organisation to implement the organisation’s strategies”. Therefore, MCS are tools to aid management for steering an organisation toward its strategic objectives and competitive advantage. Anthony and Govindarajan (2007) noted that strategies get implemented through management controls, organisational structure, human resources management and culture. Hence, it can be said that management controls represent one of the tools which managers use in achieving organisational goals and objectives.

MCS use many techniques such as budgeting, balanced scorecard (BSC), total quality management (TQM), target costing (TC), just-in-time (JIT), capital budgeting, activity-based costing (ABC) and benchmarking. These tools of control assist employees in the organisation to achieve goal congruence. Thus, Horngren, Sundem, & Stratton (2005) described MCS as integrated techniques for collecting and using information to motivate

employee behaviour and to evaluate performance. In an earlier study of Simons (1995, p. 5) MCS was also defined as “the formal, information-based routines and procedures managers use to maintain or alter patterns in organisational activities”. Anthony (1965) described it as the process of assuring that resources are obtained and used effectively and efficiently in the accomplishment of the organisation’s objectives. Klotz (1997) also pointed out that in process terms, management control exists in order to ensure that organisations achieve their objectives, and for Fisher (1995) control is used for creating the conditions that motivate an organisation to obtain predetermined results. Therefore, MCS have been viewed to have positive effect towards attainment of organisational objectives.

Considerations of interest on organisational level to designers and researchers of MCS have largely been on the positive consequences of control systems. Some of the positive outcomes which have been explored in literature include; the extent to which the control systems provide information, the usefulness of the information or the beneficial nature of the MCS and satisfaction with the systems (e.g. Chenhall & Langfield-Smith, 1998; Guilding, 1999; Mia & Chenhall, 1994; Shields, 1995).

On individual level, previous studies have examined the negative effects or consequences of MCS on job satisfaction (Banker, Potter, & Schroeder 1993; Brownell, 1982a; Chenhall, 1986), the effect of MCS on job related tension or stress (Brownell & Hirst, 1986; Hirst, 1983; Hopwood, 1972; Shields, Deng, & Kato, 2000), the effect of MCS on short-termism and managerial myopia (Van der Stede, 2000) and the relationship between MCS and managerial attitude (Arowomole, 1995; Sobarooyen, 2007). However, negative consequences such as gaming and information manipulation appear to have attracted

lesser attention in the literature. This study, therefore, examines managerial dysfunctional behaviour as a consequence of the use of MCS in quoted companies in Nigeria.

There have been suggestions that management accounting (MA) plays significant role in organisational development. IFAC (1998) noted that MA is an important part of the management process of corporate entities. It helps in ensuring that resources are used effectively in a manner that would help in creating value for the stakeholders, such as customers and shareholders. However, some notable companies which are quoted on stock exchanges around the world have suffered set-backs or have witnessed total collapse as a result of the control systems in place in such organisation (International Swaps and Derivatives Association, 2002). Hence, a study on the behavioural outcome of control systems of companies quoted on the Nigerian Stock Exchange (NSE) would be in the right direction as suggested by IFAC (2011) that attitudes and behaviour affect the performance of organisations.

1.2 OVERVIEW OF THE ACTIVITIES OF THE NIGERIAN STOCK EXCHANGE

A country's status and position on the global development scale is measured to a very large extent by its economic structure, in line with the industry contributions of the primary (agriculture and mining), secondary (manufacturing, utilities and construction) and tertiary (all services activities) sectors respectively to national output, income and employment generation (Odebiyi & Ayodele, 2008). While, the primary sector is pre-occupied with extractive activities for the production of primary resources, the secondary sector is engaged in the production of goods and services relying on inputs from the primary sector and itself. The tertiary sector takes care of the distribution aspect of what is produced. Each of these sectors has the opportunity of being listed on the Nigerian Stock Exchange (NSE).

The NSE was established in 1960 with the initial name of Lagos Stock Exchange. In December 1977 it became known as the Nigerian Stock Exchange, with branches established in some of the major commercial cities of the country. At present, there are thirteen branches of the Nigerian Stock Exchange excluding the head office which is in Lagos State; the commercial nerve of the country. Each branch has a trading floor. The Lagos office was opened in 1961; Kaduna, 1978; Port Harcourt, 1980; Kano, 1989; Onitsha, February 1990; and Ibadan August 1990; Abuja, October 1999; Yola, 2002; and the most recent, Owerri and Bauchi which were opened in 2009 (NSE, 2011).

Transactions in the stock market are guided by the following legislations, among others:

- The Pension Act of 2004.
- Investments & Securities Act of 1999.
- Nigerian Investment Promotion Commission Act of 1995.
- Foreign Exchange (Monitoring and Miscellaneous Provisions) Act of 1995.
- Companies and Allied Matters Act of 1990.
- Trustees Investment Act of 1990.

At inception in 1961, the exchange started with nineteen securities listed for trading and since then, it has witnessed significant growth to two hundred and sixty-three (263) securities as at November, 2010. These securities comprised of forty-one (41) government stocks, six (6) industrial loans stocks (debenture and preference) and two hundred and sixteen (216) equity or ordinary shares of companies. The entire securities had a total market capitalisation of ₦10.015 trillion which is much lower to ₦13.295 trillion recorded in 2007 (NSE, 2011). This reduction was a reaction to the general recession in developed economies and the controls put in place by the companies (Sanusi, 2010). The recent market capitalisation is shown in Table 1.1.

TABLE 1.1: NSE MARKET CAPITALISATION AS AT MAY 23, 2011

Category		Capitalisation	% of Total
Equities	1 st Tier Securities	8,231,703,848,596.90	69.195
	2 nd Tier Securities	4,046,066,864.20	0.034
Government Stocks	Federal government of Nigeria Bonds	2,101,666,222,400.00	17.666
Individual Loans and Preferred Stocks	Preferred Stocks, Corporate Bonds and Sub-National Bonds	1,558,973,433,674.00	13.105
	Total	11,896,389,571,535.10	

Source: *The Nigerian Stock Exchange*: Author

The securities of quoted companies (that is, equity, debentures and preference stocks) accounted for over two-third of the total market capitalisation which is in excess of ₦11.8 trillion. Given the pace of growth in the market capitalisation of securities from ₦7 trillion in 2009 to about ₦12 trillion as at May 23, 2011 (CBN, 2009; NSE, 2011), there is the need to pay particular attention to the control mechanisms that are in place in these quoted companies.

Furthermore, transactions on the floor of the exchange are regulated by the Nigerian Stock Exchange, as a self-regulatory organisation (SRO), and the Securities & Exchange Commission (SEC), which administers the Investments & Securities Act of 1999. Specifically, following the deregulation of the capital market in 1993, the Federal Government in 1995 internationalised the capital market, with the abrogation of laws that constrained foreign participation in the Nigerian capital market. Consequent upon the abrogation of the Exchange Control Act 1962 and the Nigerian Enterprise Promotion Decree 1989, foreigners can now participate in the Nigerian capital market both as operators and investors. Also, there are no limits any more to the percentage of foreign

holding in any company registered in the country. Through these various legislative frameworks, opportunities have been created for the flow of Foreign Direct Investment (FDI) into the country. For example, Nigeria witnessed an increase in FDI from \$1,539.99 million in 2009 to \$4,590.69 million in 2010 (National Bureau of Statistics, 2011).

Given the ever increasing pace of globalization, today's world economy sees a stronger FDI engagement more than ever before and an increased tempo in the activities of quoted companies. Studies of Gusc, Bremmers, Omta (2005); Radebaugh & Gray (1997) have suggested that managerial and control inputs as well as the ability to influence management decisions are distinctive features for FDI which should constantly be given attention for the survival of companies. Control mechanisms are put in place by business organisations in order to ensure that business is run in a smooth manner and according to plan. These controls set activities for employees as well as direction in order to ensure that the company achieves its goals (Bateman & Snell, 2007). They also noted that that control mechanisms should be utilized by management in all organisations. Ayodele and Falokun (2003) have also suggested that appropriate management control techniques would contribute to the development of industries in the Nigerian economy. Therefore, this study examines the extent to which selected management control systems predict managerial dysfunctional behaviour of quoted companies in Nigeria.

1.3 STATEMENT OF THE PROBLEM

The recent emphasis on corporate governance across the globe has renewed interest in the effectiveness of control systems and procedures, which serve as basis for holding enterprises and their management accountable. Thus, an enlarged audience has exhibited increasing interest in the design of management control systems (Emmanuel, 2002). An

aspect of the system that has generated much debate is the managerial behaviour induced by the control systems. For example, the troubles at Baring Brothers, Enron, and others in Nigeria such as African Petroleum Plc, Cadbury Nigeria Plc and Lever Brothers Plc have been interpreted to be behavioural responses to the control systems employed in these companies (Ajibolade, 2008b; Bakre, 2007; Emmanuel, 2002). Ayadi, Adebayo and Omolehinwa (1998) also noted that bank failures in the 1990s were as a result of inefficiencies in the control systems put in place by management. Furthermore, organisational and personal interests are achieved when structures support them (Otusanya, Ajibolade and Omolehinwa, 2011). Indications from these arguments are that dysfunctional behaviour arises from the nature of the control systems put in place.

However dysfunctional behaviour as a consequence of control systems structures has been underplayed in research. MCS research has generally been biased towards the positive consequences of MCS, such as performance, satisfaction, attitude or motivation (Ajibolade, 2008a; Arowomole 1995; Simons, 1987; Van der Stede, 2000).

Various forms of dysfunctional behaviour including smoothing, biasing, gaming and filtering have been reported in literature (Birnberg, Turpolec & Young, 1983). However, gaming and information manipulation have been less considered empirically. Beginning with the basis that all human beings wish to show themselves in the most favourable light, it is inevitable that providers of information will attempt to manipulate reports to suit their own purposes (Prakesh & Rappoport, 1977). Financial performance measurement is one critical and controversial area where such manipulations often occur. For example, reported income may not reflect true economic achievement, but instead an apparent and misleading signal which is nevertheless consistent with the message the superior wants to hear (Merchant & Rockness, 1994).

Information manipulation is also commonly associated with an important component of the MCS; the budget, often used for employee motivation, resource allocation and performance evaluation (Walker & Johnson, 1999). An aspect of such information manipulation in the budgeting process is the concept of budgetary slack, which Webb (2002, p. 362) described as “intentional biasing of performance targets below their expected level”. Similarly, Young (1985, p. 829) defined budgetary slack as “how much managers intentionally build excess requirements for resources into the budget, or knowingly understate productive capability”. Although a perspective exists in literature which argues that building slack into a budget acts as protection from uncertainties in the environment (Cyert & March, 1963), suggesting a positive function for slacks in absorbing fluctuations in an uncertain environment, budgetary slack is more commonly viewed as a dysfunctional behaviour. This view held that budgetary slack directly conflicts with the economic interests of a firm since it leads to less effort and results in inefficient distribution and utilization of the firm's resources (Van der Stede, 2000; Webb, 2002; Yuen, 2004).

Although, studies exist which have attempted to link MCS and dysfunctional behaviour (Jaworski & Young, 1992; Marginson & Ogden, 2005; Van der Stede, 2000), these studies have primarily considered one MCS component at a time (mainly budget-based) and have limited dysfunctional behaviour mainly to budgetary slack, (suggesting that dysfunctional behaviour has been conceptualised in a constrained way). This study in an attempt to address this limitation in prior studies examines the effects of four components of MCS (budget participation, budget emphasis, standard operating procedures and non-financial performance measurement) on managerial dysfunctional behaviour viewed from a broader perspective of two types of the behaviour; gaming and information manipulation.

Several theories have been advanced for the study of MCS and many prior studies have utilised such theories in isolation of other theories. The conflicting findings in the studies have resulted in calls for integrating different theories in the study of MCS (Chenhall, 2003). The integration of institutional and contingency theories has been suggested to hold much promise for explaining the functioning of MCS in organisations (Modell, 2002; Scott, 1996). Studies (e.g Ajibolade 2008a) have provided attempts at integrating these two seemingly opposing theories of MCS in examining its positive consequences. This study, a further attempt in that direction, incorporates the influence of institutional and contingency factors in its model for the study of negative consequences of the use of MCS.

While MCS studies have been dominated by those from developed economies this study would provide contributions from Nigeria, a developing country to further enrich literature.

1.4 AIM AND OBJECTIVES OF THE STUDY

The aim of this research was to empirically appraise the managerial dysfunctional behaviour (MDB) outcome of management control systems (MCS) in Nigerian quoted companies and examine the existence of moderating effects of other variables on the relationship. In achieving this aim, this study specifically identified the following objectives:

- i. examine the extent of the influence of budget participation on MDB (gaming and information manipulation) in quoted companies in Nigeria;
- ii. investigate the extent of the influence of budget emphasis on MDB (gaming and information manipulation) in quoted companies in Nigeria;

- iii. assess the extent of the influence of standard operating procedures on MDB (gaming and information manipulation) in quoted companies in Nigeria;
- iv. examine the extent of the influence of non-financial measurement on MDB (gaming and information manipulation) in quoted companies in Nigeria; and
- v. determine whether contingency and institutional variables moderate the relationship between MCS and MDB of quoted companies in Nigeria.

1.5 RESEARCH QUESTIONS

The main research problem was broken down into seven (7) sub-problems stated as research questions, which guided the study. These are as follows:

- i. To what extent are managers involved in the setting of budgets for their organisations or departments in Nigeria?
- ii. What is the extent of influence that budget participation has on gaming and information manipulation in quoted companies in Nigeria?
- iii. To what extent does budget emphasis influence the level of gaming and information manipulation in quoted companies in Nigeria?
- iv. To what extent do standard operating procedures influence gaming and information manipulation in quoted companies in Nigeria?
- v. What is the extent of influence that non-financial measurement has on gaming and information manipulation in quoted companies in Nigeria?
- vi. To what extent do contingency variables (perceived environmental uncertainty and business unit strategy) moderate the relationship between MCS and MDB of quoted companies in Nigeria?
- vii. To what extent does institutional variable (institutional pressures) moderate the relationship between MCS and MDB of quoted companies in Nigeria?

1.6 HYPOTHESES OF THE STUDY

Seven (7) null hypotheses stated below were proposed in order to provide answers to the research questions stated above. Research question one was not subjected to the formulation of hypothesis, but answered using descriptive statistics.

H₀₁: There is no significant difference between the level of MDB of quoted companies with high level of budget participation and those with low budget participation.

H₀₂: There is no significant difference between the level of MDB of quoted companies with high level of budget emphasis and those with low budget emphasis.

H₀₃: The level of standard operating procedures has no significant influence on the extent of MDB (gaming and information manipulation).

H₀₄: Non-financial measurement has no significant influence on the extent of MDB (gaming and information manipulation).

H₀₅: Level of perceived environmental uncertainty (PEU) has no significant moderating effect on the relationship between management control system variables and extent of MDB.

H₀₆: Business unit strategy (BUS) has no significant moderating effect on the relationship between management control system variables and extent of MDB.

H₀₇: Institutional pressures (IP) have no significant moderating effect on the relationship between MCS variables and extent of MDB.

1.7 SIGNIFICANCE OF THE STUDY

Literature contains scanty empirical evidence on the impact of MCS on managers' dysfunctional behaviour (Soobaroyen, 2007); this study is an attempt to increasing the

body of knowledge in understanding the extent to which various MCS variables predict MDB. This understanding should inform stakeholders on whether there are specific MCS variables which engender or reduce dysfunctional consequences. Thus, the findings of this study would provide useful information on behavioural aspects of achieving organisational goals or objectives, especially for quoted companies in Nigeria.

This study should be of significance to quoted companies in Nigerian as the study highlights the impact of management control systems on managers' dysfunctional practices. This will create awareness on dysfunctional consequences which may arise from their choice of MCS. Furthermore, there is dearth of literature on MCS and MDB in Nigeria and other developing economies. The available ones are largely from developed economies as found in the studies of Abernethy & Brownell (1999), Chow et al. (1996), Dunk (1993), Henri (2006), Jaworski and Young (1992) and Onsi (1973). Wallace (1987) noted that studies from developing economies should be improved upon so as to augment existing body of knowledge. This study is a contribution from Nigeria, a developing country.

Ajibolade (2008a) also noted that there is the need to have an understanding of the factors that influence the interaction between MCS and companies' performance. Such understanding may prove very useful in enhancing economic growth and development through improved use of MCS. As pointed out by Ferreira and Otley (2009) companies should place more attention on using MCS both diagnostically and interactively by harmonizing their MCS to the contingencies faced and from high intensity of MCS use. Literature has offered that the equivocal findings in prior studies can be reduced by encouraging contingency and institutional based research (Ajibolade, 2008a; Soobaroyen,

2007). This study draws attention to the interactions that these paradigms have on the relationship between MCS and MDB in quoted companies in Nigeria.

This study will also be beneficial to researchers, students of management accounting, and policy makers. This is because management accounting is an important aspect of students' syllabus and the outcome of the study will provide a reference point for future researchers and a blue-print for policy makers.

1.8 OPERATIONAL DEFINITION OF TERMS

Management Control Systems (MCS) - are sets of interrelated communication structures that facilitate the processing of information for the purpose of assisting managers in coordinating the parts and attaining the purpose of an organisation on a continuous basis. In essence, management control systems are defined in this study in terms of two broad management control sub-system or mechanisms, financial and non-financial control subsystems. For the purpose of this study, the financial control mechanisms are budget participation and budget emphasis while the non-financial control mechanisms are standard operating procedures (SOP) and non-financial performance measurement.

Budget Participation – Extent of involvement and influence which managers perceive that they have on or in securing a budget or financial target within their department or organisation.

Budget Emphasis – Extent of importance attached to meeting budgeted targets and the achievement of financial operating efficiencies.

Standard Operating Procedures – Sets of unavoidable formal and documented operating rules or procedures within the organisation on how tasks should be performed.

Non-financial Performance Measurement – Extent to which managers' performance are appraised based on product innovation, deviations from work output, customer service, employee relations, team-playing, attitude to work, and market share.

Contingency Variables – These are variables within the organisation's environments which have moderating influence on the attitude of managers towards work processes. For the purpose of this study, perceived environmental uncertainty (PEU) and business unit strategy (BUS) have been chosen.

Perceived Environmental Uncertainty – PEU represents the perception of respondent managers on the uncertainties facing their companies in their environment. These perceived uncertainties are measured in relation to how predictable their environment is given the challenges of price completion, political constraints, ease of access to funds, obsolescence of equipments and competition for manpower.

Business Unit Strategy – BUS represents how businesses are positioned relative to their competitors in terms of product selling price, research and development expenditures, product quality, brand image, and product features.

Institutional Variables – Are variables within the organisation's external environments which have moderating influence on the attitude of managers towards work processes due to pressure on them to conform to specific organisational practices and procedural requirements. For the purpose of this study, institutional pressure (IP) has been chosen.

Institutional Pressure – IP represents the extent to which the operating situation of a company is directly affected by actions associated with parent company, international affiliation, regulatory agencies, professional associations, trade associations and media

publicity. In essence, IP describes the extent to which an organisation is demanded to conform to good organisational practices and procedural requirements.

Managerial Dysfunctional Behaviours – MDB represents activities that managers engage in when they are facing potential or actual embarrassment by intentionally violating control system rules and procedures. Such variable in this study consists of information manipulation and gaming.

Gaming – Actions engaged in by managers to achieve favourable set of numbers which may lead to misguided decisions and sub-optimal performance for the organisation as a whole.

Information Manipulation – Methods used in distorting the information system. Such methods consist of smoothing and filtering.

1.9 THEORETICAL/CONCEPTUAL FRAMEWORK

The accomplishment of organisational objectives or goals has been attributed to managerial control, which involves monitoring of activities and taking corrective actions to assure that resources are being effectively and efficiently used (Giraud, Zarlowski, Saulpic, Lorain, Fourcade and Morales, 2011). Management control is an approach involving several collections of tools which makes it possible for a company to create desired results by taking action to achieve those results as best it can over time. MCS have been identified as a collection of interrelated communication structure which helps managers to influence other members of the organisation for the purpose of achieving organisational goals on a continuous basis (Anthony & Govindarajan, 1998). Management control is therefore the process that links strategic planning and operational control (Otley, Broadbent & Berry, 1995).

Malmi and Brown (2008) noted that management controls include all the devices and systems managers use to make sure that the behaviours and decisions of their employees are in congruence with that of the organisation. The study identified that such systems as budgeting or a strategy scorecard can be categorised as a management control system. According to Merchant and Van der Stede (2003), a collection of different control mechanisms or management controls that are used by managers is generally described as management control system. Malmi and Brown (2008), on the other hand, concluded that though organisations have various MCS, the whole system could be called MCS only if these systems were designed and coordinated in order to achieve specific purpose. Therefore, this suggests that important choices have to be made in the selection and application of different MCS.

Three of the several paradigms which have been used in explaining MCS have been agency theory, contingency theory and institutional theory. These three theories which share common ground in focusing on the organisational level (Covaleski, Evans, Luft and Shields, 2007) provide the theoretical and conceptual underpinnings for this study.

1.9.1 Agency Theory

The importance of management accounting as a control system has been emphasized in agency relationship consisting of a principal and an agent. In an agency theory setting, a principal employs an agent to carry out productive actions. According to Kangarluei, Ahmadi, Golonji (2011), agency theory provides a theoretical underpinning for many research efforts cutting across several disciplines. They noted that it is one of the most influential theories that have inspired series of research in the areas of corporate governance and management control in the western world. Agency theory proposes that an agent, acting in self-interest, is capable of engaging in dysfunctional behaviours known

as adverse selections and moral hazards (Baiman, 1982). The principal relies on accounting control system to influence or control the agent's actions.

Outcomes to the agency are presumed to be a joint function of agent's inputs (effort) and environmental effects. It is generally assumed that the principal is risk-neutral and the agent is risk and effort averse (Fama, 1980). Since the agent attaches disutility to effort, the agent will attempt to create slack (regarded as a form of dysfunctional behaviour, Birnberg et al., 1983 and Jaworski & Young, 1992), to maximize utility, as slack is believed to limit the level of effort put in by the subordinate. According to Scapens (1991, cited in Lau, 1999), slack is considered as inefficiency or a loss that occurs because of asymmetric pre-decision information. The study also noted that the principal would always want to maximise utility and would therefore attempt to solicit the optimal effort from the agent through the choice and use of MCS. Furthermore, an agency relationship exists whenever the principal depends on the agent to carry out some actions for the principal (Bergen, Dutta, & Walker, 1992). However, a fundamental problem in agency theory is alignment of goals between agents and principals (that is, the employees and employers (Fama, 1980; Fama & Jensen, 1983). Employers and employees are assumed to have different objectives, with employees preferring leisure or shirking whenever possible (Gerhart & Rynes, 2003).

The development of the principal-agent theory has led to the consideration of the level of information available to the parties as being a critical factor which can shape the use of MCS. A difference in the level of information available to the principal and the agent is often referred to as information asymmetry (Dunk, 1993). A number of researchers (e.g., Dunk, 1993; Otley, 1978; Schiff & Lewin, 1970; Young, 1985) noted that information asymmetry is likely to lead to a higher incidence of dysfunctional budgetary behaviour.

For example, Otley (1978) argued that problems arising from uncertainties surrounding the use of MCS are believed to be greater to principal (the superior) than the agent (the subordinate). Thus, any MCS mechanism, which increases the amount of information asymmetry, is likely to increase the agent's dysfunctional behaviour. In a nutshell, the agency theory of MCS has given consideration for internal factors such as structure of the organisation and external factor, mainly the level of information available to the agents. The view espoused by Fama (1980) on superior and subordinate relationship which can engender dysfunctional behaviour (Baiman, 1982) is assumed in this study.

1.9.2 Contingency Theory

Another approach to examining MCS as part of organisations' MCS has been to link management accounting with organisation theory. McInnes and Ramakrishnan (1985) noted that contingency theory is an important organisation theory which has offered explanations on the use of MCS within organisations. The contingency theory of MCS in ensuring that MCS is aimed at maximising managerial performance and effectiveness suggests that organisations structure and design their MCS in relation to internal and external contingent factors. Contingency theory greatly analyses the components of the organisation, structure and cultural settings (Baligh, 1994) and the firm's ability to adapt to changes (Child, 1970; Grant, 1988). Contingency theory suggests that the best way to organise is dependent upon particular situation that the organisation finds itself in (Ezzamel & Hart, 1987). This theory led to the large number of case studies, survey and field research methodologies on MCS (Fisher, 1995; Merchant & Simons, 1986).

The contingency theory has also been used to explain the interaction between MCS control mechanisms, contingency variables and performance. Chapman (1997); Ezzamel (1990); Hartmann (2000) suggested that uncertainty, as conceptualised by Galbraith

(1973), is a key concept when explaining and predicting the appropriateness of MCS. Studies of Simon (1991, 1994) made effort in identifying superior's use of MCS by focusing on interactive and diagnostic use of controls. For example, Simon's (1994) study of business unit managers who were involved in strategic change process noted that managers exhibited particular behaviour as a result of the use of MCS. However, Simon's study did not make use of the suggestion of Chapman (1997) on the possible effect of uncertainty.

Based on the contingency theory, literature on management control systems suggested that the design and use of such systems are related to external variables, such as environmental uncertainty, and organisational context, such as size, technology, diversity and the degree of decentralisation (Ajibolade, 2008a; Ajibolade, Arowomole & Ojikutu, 2010; Bruns & Waterhouse 1975; Merchant, 1981; Soobaroyen, 2007), level of interdependence between departments (Macintosh & Daft, 1987), as well as competitive strategy adopted by the organisation (Abernethy & Brownell, 1999; Simons, 1987; Van der Stede, 2000).

Contingency-based studies focusing on budget related behaviour (Abernethy & Stoelwinder, 1991; Kenis, 1979; Merchant, 1984), budgetary participation (Brownell, 1982b), budgetary slack (Merchant, 1985) and sophistication of control systems (Ajibolade, 2008a; Khandwalla, 1972) have identified environment as a crucial factor in management accounting research. Overall, the environment, often measured in terms of task environment, is a situational factor when measuring the response of managers to budgetary activities. However, few studies have dealt with how other situational factors such as business unit strategy affect budgetary behaviour. Similarly, with the complex environment in which organisations operate in, Sundin, Brown and Booth (2008, p. 4)

noted that “the management accounting literature is limited” in addressing the influence of institutional theory in MCS.

1.9.3 Institutional Theory

The institutional paradigm relates to how an organisation conforms to the pressure of constituents in the organisational field (DiMaggio & Powell 1983). Institutional theory argues that institutions operate in and are influenced by an institutional environment rather than the need for efficiency (DiMaggio & Powell 1983; Meyer & Rowan 1977). DiMaggio and Powell (1983) identified three mechanisms through which organisations change as a result of pressures exerted by constituents: coercive isomorphism that stems from political influences and the problem of legitimacy; normative isomorphism, associated with professionalization; and mimetic isomorphism resulting from standard responses to uncertainty. The institutional environment is argued to be comprised of multiple constituents with potentially conflicting interests who exert pressure over the organisation (DiMaggio & Powell 1983; Modell 2003). These constituents from which pressures are exerted includes; key suppliers, resource and product consumers, regulatory agencies, and other organisations or institutions that produce similar services or products (DiMaggio & Powell 1983; Lee & Modell, 2000). It is widely acknowledged in this body of literature that problem arises (e.g. budget padding, re-allocation of resources and coordination problem) for organisational design and control when inconsistent and conflicting constituent pressures arise (Modell 2002). For example, Lee and Modell (2000) proposed that interaction between the extent of budget participation initiated by departmental managers and institutional pressures is correlated with reduced coordination problem. The study found that perceived coordination problem is lower when there is higher level of institutional pressure and budget participation was high.

This study adapts Modell's (2002) view that problems can arise within the organisation when there are pressures from other organisations. Such pressure is modelled in this study as existence of pressure from various institutional organisations which are perceived to have one form of influence or the other on the organisations being studied. Thus, the study proposed that institutional pressures from various interest groups would moderate the relationship between management control system and dysfunctional behaviour.

1.10 DESCRIPTION OF THE MODEL OF THE STUDY

Based on agency, contingency and institutional paradigms, a model was proposed (Figure 1.1) which suggests relationships among four broad groups of variables which are management control system variables, contingency variables, institutional variable and managerial dysfunctional behaviour variables.

The studies of Fisher (1995); Macintosh and Daft (1987); Soobaroyen (2007); Williams, Macintosh, and Moore (1990) suggested that MCS variable can be broken down to include budget participation (BP), budget emphasis (BE), standard operating procedures (SOP) and non-financial measurement (NFM). Other studies have used some of these classes of variables. As noted in Shields and Shields (1998), most studies theorize that budget participation influences organisational and employee outcomes such as motivation, performance, job satisfaction and dysfunctional behaviour. Young (1985) suggested that managers may use the opportunity given by participation to reduce the standards demanded of them and to bias the estimates they submit. Similarly, the extent to which emphasis is placed on achieving budgetary targets (budget emphasis) has also been linked with dysfunctional behaviour (Linn, Casey, Johnson & Ellis, 2001; Merchant, 1985a).

Williams et al. (1990) also investigated a number of budget related variables such as SOP. They found greater emphasis on SOP (standardization, plans, rules, and procedures) when interdependence was low. SOP enhances control over tasks it supports by reducing opportunistic behaviour of the person(s) performing the task (Fisher, 1995). Procedures usually provide for a paper trail, authorization limits and compulsory counterchecks that enhance the visibility and transparency of activities carried out, or decisions taken, by managers. While dysfunctional practices involve distortion of MCS information by circumventing formal rules and regulations of the organisation (Soobaroyen, 2007), it is argued that SOP creates enough precision and speed of action by administrative management to curtail dysfunctional practices.

Based on these studies, the path from MCS to MDB indicates the proposition that extent of MCS usage determines the extent of dysfunctional behaviour engaged in by managers based on the arguments from the principal-agent theory propositions of Fama (1990), Jensen and Meckling (1976). This theory assumes that parties may engage in opportunistic and individualistic interest which may impact on efficiency. Such opportunistic behaviour is dysfunctional and inimical to the performance of organisation (Merchant, 1985a). Many components of dysfunctional behaviour have been identified; these include rigid bureaucratic behaviours, strategic behaviours, resistance and invalid data reporting or information manipulation (Birnberg et al., 1983; Jaworski & Young, 1992). Gaming and information manipulation as a form of dysfunctional behaviour are of particular importance in this study because of their impact on other functions within the organisation.

Although the MCS-MDB path is suggestive of self-interested humans, it has been criticised for this as the principal and the agent operate in a complex environment. The

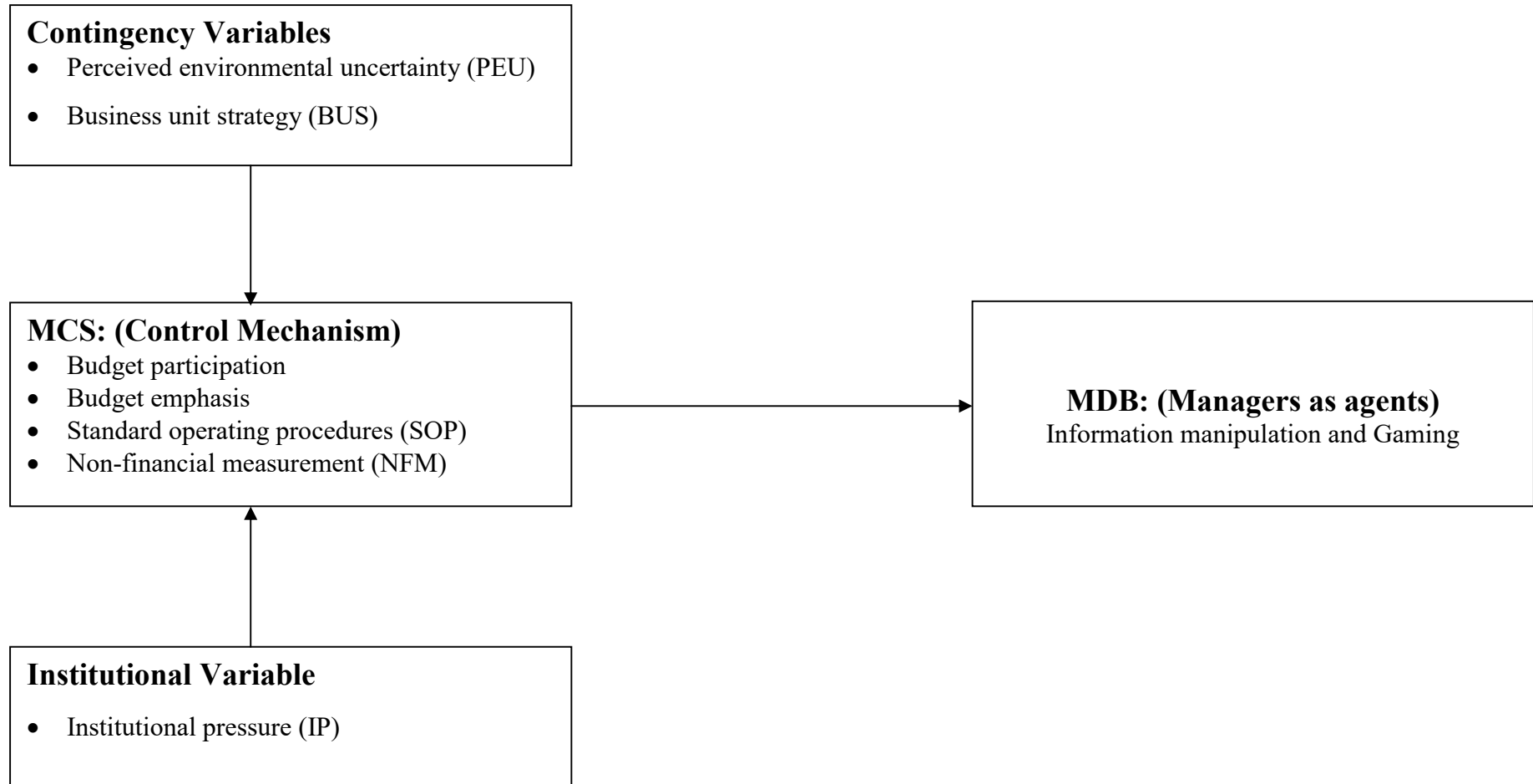
use of multiple theories to achieve a more realistic view of organisations has been suggested (Hirsch, Michaels & Friedman, 1987). Ajibolade (2008a) and Soobaroyen (2007) suggested that there is the need to improve MCS by intensifying effort in identifying contingency and institutional variable which may affect the use of MCS. For example, contingency variables such as, decentralisation, perceived environmental uncertainty (Ajibolade et al., 2010; Govindarajan, 1986), task uncertainty, levers of control (Brownell, 1981; Simon, 1994), legitimacy and institutional variables such as stock exchange listing (Ajibolabe, 2008a) and legitimacy have been identified as having effect on the design and use of MCS in organisations. These literatures have shown that environment is a crucial factor when measuring the response of managers to budgetary activities. The concept of uncertainty has been applied as a contingency variable in a wide range of business-related fields including strategic management (Paulraj & Chen, 2007), marketing (Achrol & Stern, 1988), information systems (Mangaliso, 1995) and accounting (Ajibolade, 2008a; Chenhall & Morris 1986). However, most studies have failed to clearly distinguish between the three types of uncertainty pertaining to general external environments, cause-effect relationships between an organisation and its environment, and decision outcomes (Sund, 2008). Therefore, this study models uncertainty from these three perspectives as it has received less attention and they clearly depict environmental uncertainty as not a one-dimensional but multi-dimensional construct (Milliken, 1990) in contingency studies.

Contingency theory has also noted that business strategy plays an important role in the design of MCS. Van der Stede (2000) noted that the budgetary control styles that organisations implement and the behaviours that they encourage may be affected by business unit past performance and competitive strategy. The business unit strategy (BUS) was measured by low cost and differentiation typology of Porter (1980) consisting

of five indicators which usually relate how managers would position their organisation relative to competitors in terms of product selling price, research and development expenditures, product quality, brand image and product features. The Porter's typology was chosen in this study for two reasons. On one hand, this topology is well documented and prospectors/defenders-type (Miles & Snow, 1978) exhibit similar characteristic to strategy identified in other studies such as entrepreneurial and planning mode firms (Mintzberg, 1973), and innovators and dominant firms (Miller & Friesen 1978). On the other hand, this typology has been tested in management accounting studies and found to be a useful means of classifying generic strategies across diverse industries (Van der Stede, 2000). Therefore, this study models perceived environmental uncertainty and business unit strategy as contingency variables. However, Abernethy and Chua (1996) suggested that control system is not only contingent on the technical environment of organisations but also on pressure from the institutional environment.

Molls, Burns, and Major (2006) also advocated that accounting is affected by institutional variables which may help in shaping the environment. Hoque and Hopper (1994) opined that there is significant institutional pressure on MCS and that external aid agencies and the state were major influences on MCS. The paths from these two paradigms (contingency and institutional theories) to the MCS-MDB path are to explain whether environmental uncertainty, business unit strategy and institutional pressure have any moderating effect on the relationship between MCS and MDB. Overall, the paths shown in the model indicate lines of influence.

FIGURE 1.1: CONCEPTUAL MODEL OF THE RELATIONSHIP BETWEEN MCS AND MDB



Source: Author (2011). Designed for the study

1.11 SCOPE OF THE STUDY

This study of the relationship between MCS and MDB of selected quoted companies in Nigeria cuts across a number of disciplines. It also uses different variables and tools. For example, the tools of MCS include budgeting, total quality management (TQM), target costing (TC), just-in-time (JIT), capital budgeting and a number of financial and non-financial performance measurement. MDB can also be viewed from different perspectives and studying this may take us to accounting, economics, sociology, organisational management, and organisational behaviour. Therefore, it is necessary to delimit the scope of this research work.

The focus of the research in terms of MCS variables are budget participation, budget emphasis, standard operating procedures and non-financial measurement. These variables have been selected because the findings on them have been inconclusive and their negative consequences have been less considered. MDB is studied in terms of gaming and information manipulation. Therefore, perceptions of managers would be sought in providing answers to the problems and questions that have been raised in this research work. The focus of the research is on quoted companies on the Nigerian Stock Exchange that have their head offices located in Lagos State.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The concern for improved control systems in order to enhance organisational performance has been receiving a growing interest among researchers, managers and regulators. Studies have shown that firms use their management control systems (MCS) to motivate employee behaviour (Arowomole, 1995; Horngren et al., 2005), attain organisational objectives (Kloot, 1997) and performance (Ajibolade, 2008). The relationship between MCS and organisational effectiveness is however still laden with contradictions in literature (e.g. Chenhall & Brownell, 1988; Hope & Fraser, 2003; Otley, 1978) and most of these studies have been mainly budget-based. This has led to a number of theoretical underpinnings from which explanations for such conflicts are explained.

This chapter provides a review of the theoretical and empirical literature pertaining to the study of management control systems (MCS) within the limit of sparse literature on managerial dysfunctional behaviour (MDB). In doing this, this chapter is geared towards providing historical perspectives of MCS and to highlight the abundance of literature on the positive consequences of MCS amidst the neglect of possible negative consequences (Hope & Fraser, 2003). This chapter also provides a review of the three dominant paradigms (agency theory, contingency theory and institutional theory) which have offered explanations on the use of MCS within organisational context and which serve as the foundation for this study. It also presents a discussion of literature with the aim of identifying the main methodologies and research techniques that have been used in prior studies of MCS.

2.2 AN OVERVIEW OF MANAGEMENT CONTROL SYSTEMS

The term “control” has been viewed from different perspectives with numerous meanings and different connotations, some of which cannot be applied to the field of management (Atkinson, Banker, Kaplan & Young, 2001). “Control” in this study is defined within the confines of management control. Anthony (1965) introduced the term management control as the process of ensuring that resources are obtained and used effectively and efficiently towards the attainment of the goals and objectives of the organisation. Otley (1999) noted that the intention of the earlier study of Anthony (1965) was to expand the scope of information been considered beyond just accounting information to other issues such as managerial motivation and behaviour. In process terms, management control exists in order to ensure that organisations achieve their objectives (Kloot, 1997). Fisher (1995) noted that control is used for creating the conditions that motivate an organisation to obtain predetermined results.

Some studies have also described management control (MC) as a process which managers use subjectively in order to influence the performance and behaviour of the people forming an organisation (Flamholtz, 1983; Inzerilli & Rosen, 1983; Tannebaum, 1967) while others have described MC as avenue to implement the strategies of the organisation so that it may attain its objectives (Collins, 1982), both effectively and efficiently (Carenys, 2010).

Management Control Systems (MCS) is thus the process that links strategic planning and operational control (Otley, Broadbent & Berry, 1995). It also assists in providing valuable information which can be used in decision-making, planning and evaluation (Merchant & Otley, 2007; Widener, 2007). The focus of MCS is not only on one form of control like performance measures but on multiple control systems working together.

Simons (1995, p. 5) noted that “MCS are the formal, information based routines and procedures managers use to maintain or alter patterns in organisational activities”. While strategic control assesses the issue of whether the strategy chosen by the organisation is valid, management control, according to Merchant and Van der Stede (2007) addresses the question of whether employees behave appropriately or not. MCS is therefore intended to help the organisation to motivate employees to make decisions and to take actions which are in the organisation’s best interest (Chow, Shields & Wu, 1999). MCS serves two main purposes which are; provision of valuable information useful to management and the display of viable patterns of employee behaviour that will assist in achieving organisational objectives.

Studies in management accounting have noted that MCS has taken different nomenclature in its description. For example, Chenhall (2003) noted that management accounting (MA), management accounting systems (MAS), organisation control (OC) and management control system (MCS) have been used as substitution for one another. His study on MCS design also noted that MCS embraces both MAS and other controls such as behaviour controls.

Within the body of literature, controls have been categorised in different ways with each having its own distinctive features (see Chenhall, 2003; Merchant, 1998). For example, formal and informal controls (Merchant, 1998; Simons, 1995), output and behaviour controls (Ouchi, 1977), administrative and social controls (Hopwood, 1976), results, action and personnel controls (Merchant, 1998; Merchant, 1985a), tight or loose controls (Merchant, 1998; Whitley, 1999), restricted/flexible (Otley, 1994), and financial or non-financial control (Modell, 1995).

According to Simons (1995), formal controls include rules, standard operating procedures and budgeting systems while informal controls are controls that are not consciously designed and they include unwritten policies of the organisation which are derived from the organisational culture. Goold and Quinn (1990) noted that strategic controls are concerned with formulating competitive benchmarks and the use of non-financial performance measures. These studies suggest that there are varieties of MCS which according to Chenhall (2003) are adopted to assist managers achieve some desired outcomes.

2.2.1 Outcomes of MCS Research

Based on the review of MCS literature, the results or outcomes of research focusing on MCS have taken different dimensions. According to Chenhall (2003), these dimensions can be classified into usefulness of MCS, behavioural dimensions and organisational dimensions. Researchers studying MCS have examined outcomes such as the extent to which the systems provide information (Mia & Chenhall, 1994), the degree of use (Abernethy & Guthrie, 1994; Guilding, 1999), the usefulness of the information (Chenhall & Morris, 1986; Shields, 1995) or the beneficial nature of the MCS (Chenhall & Langfield-Smith, 1998); the importance in making operational decisions (Bouwens & Abernethy, 2000); importance to product development (Davila, 2000), whether they are helpful to the organisation (Guilding, 1999), and satisfaction with the systems (Bruns & Waterhouse, 1975).

Behavioural outcomes of management control systems such as job satisfaction have been identified as an important area in human resource management (Chapman, Hoopwood & Shields, 2007). A variety of studies has examined the effect of MCS on job related tension or stress (Brownell & Hirst, 1986; Hirst, 1983; Hopwood, 1972; Shields, Deng, &

Kato, 2000), short-term orientation (Van der Stede, 2000) and managerial attitude (Arowomole, 1995; Soobaroyen, 2007). Unlike job satisfaction, stress appears to be more closely related to the nature of the MCS and is implicated in associations with performance (Shields et al., 2000). However, negative outcomes of MCS have received lesser attention.

A variety of aspects of MCS has been focused on in the literature. Some of these aspects include; budgetary participation, budget emphasis (Dunk & Nouri, 1998; Merchant, 1981; Merchant, 1985a; Van der Stede, 2000), formal controls (Simon, 1995) and financial controls (Modell, 1995). The study of Auzair and Langfield-Smith (2005) suggested that organisations are expected to exercise control along the MCS distinctive feature. These studies informed the choice of MCS variables; budget participation (BP), budget emphasis (BE), standard operating procedures (SOP) and non-financial measurement (NFM) which are used in this study.

2.3 BUDGET PARTICIPATION

The budgeting system is a traditional way of managing and controlling companies. It is a control tool (Libby & Lindsay, 2003) which organisations use in planning and coordinating their affairs. Hansen, Otley and Van der Stede (2003) also described budgeting as the cornerstone of the management control process of many organisations. The rationales for having a budget include planning, performance evaluation and motivation (Drury, 2004; Hansen & Van der Stede, 2004). Participation is one of the ways by which budgeting has been operationalised in the MCS literature. Eker (2006) described budget participation as the involvement of top managers and subordinates in the process of allocating resources to their activities and operations. This process of making an employee participate is often referred to as bottom-up budget setting while the top-

down budget settings does not give employees the opportunity to participate in the budget process (Drury, 2004). Budget participation is one of the MCS variables that have received wide attention in literature (Luft & Shields, 2003) with studies suggesting MCS outcomes such as motivation and commitment (Chow, Cooper and Waller, 1988; Lau & Buckland, 2001), job satisfaction (Chenhall, 1986), performance (Ajibolade, 2008; Kenis, 1979); usefulness of information (Shield, 1995); job related tension or stress (Brownell & Hirst, 1986; Shields et al., 2000) and managerial attitude (Arowomole, 1995). Overall, these studies suggest that MCS tools such as budget participation can be linked to organisation or individual outcomes as well as behavioural outcomes.

2.3.1 Organisational or Individual Level Outcomes of Budget Participation

In a discussion of how budget participation evolved in literature, Vroom and Jago (1974) noted that March and Simon (1958) were among the first to argue that the more participation of subordinates in making policy decisions, the stronger the tendency of subordinates to identify with the organisation while Arowomole (1995) was among the first in Nigeria to argue in this line. Lincoln and Kalleberg (1985, p. 754) argued that participation “serves to integrate workers in the organisation and commit them to organisational decisions”. Those studies which report a significant positive relationship between employee participation and organisational commitment include: DeCotiis and Summers (1987); Boshof and Mels (1995).

Several studies have proposed that budget participation is positively linked to employee performance (e.g. Becker & Green, 1962; Hofstede, 1968; Mohd, Nik & Abdul, 2008). For example, Yahya, Ahmad & Fatima (2008) noted that budgetary participation improves managerial performance of Malaysian Ministry of Defence. According to this viewpoint, budget participation leads to high motivation and thus to high performance.

However, Brownell and McInnes (1986) found that motivation does not mediate the relationship between budget participation and job performance. Further, while some studies report a significant positive association between budget participation and job performance (e.g. Brownell, 1982a; Merchant, 1981) others report a significant negative association (e.g. Bryan & Locke, 1967).

Shields and Shields (1998) observed that budget participation has been receiving a lot of research attention for over forty years. Kren (1992a); Magner, Welker and Campbell (1996); Chong and Chong (2002) have examined the cognitive role of budgetary participation. These studies confirmed that budgetary participation facilitates the gathering of job-relevant information. Kren (1992a) defined job-relevant information as the information that facilitates job-related decision making. According to Shields and Young (1993), one of the primary reasons that companies use participative budgeting is to facilitate the communication of private information from subordinates to superiors.

Although there is a lot of research attempting to find the relationship that budget participation has with job performance and/or satisfaction, the results from such studies have been equivocal. Several authors such as Gul, Tsui, Fong and Kwok (1995); Lau, Low and Eggleton (1995); Milani (1975); Nouri and Parker (1998) have offered empirical evidence on the relationship between budgetary participation and performance. While some studies have found a positive relationship between budget participation and job performance (Hofstede, 1968; Lau et al., 1995, Nouri & Parker, 1998), others have suggested that there is a weak positive relationship (Milani, 1975), or even a negative relationship (Hopwood, 1972), between the two variables. These diverse results indicate that no simple relationship exists between budget participation and job performance, and suggest that there could be other variables involved.

Chenhall and Brownell (1988) observed both a significant direct relationship between budget participation and satisfaction and a significant indirect relationship between budget participation and satisfaction using role ambiguity as a mediating variable. Fourteen years after, a study to confirm these findings was carried out by Chong (2002) using a random sample which was observed to be a major limitation of the earlier study. Chong examined budgetary participation from two different dimensions vis-à-vis, budgetary involvement and budgetary influence of employees. Using structural equation modelling and a sample of ninety-seven managers, Chong's findings were consistent with those of Chenhall and Brownell (1988), except that it is the influence dimension of budgetary participation that is principally responsible for the results. Furthermore, these findings aligned itself with that of Libby (1999) who found that the performance level of the subordinates are improved when they are given the opportunity to get involved in and have influence in the budget setting before it is finalized. Similarly, Frucot and Shearon (1991) noted a significant positive relationship between budget participation and satisfaction by using Mexican managers as a sample. These studies have focused primarily on positive consequences of budget participation as MCS variable.

Given that motivation was one of the main objectives underlying subordinate participation in setting budgets, earlier studies have considered direct relationships between the extent of participation and motivational-led variables. For example, Kenis (1979); Merchant (1981); Searfoss (1976) found a significant positive relationship between participation and motivation. This significant positive correlation was however not supported in the participation-performance link of Searfoss and Monczka (1973), therefore suggesting that findings have been mixed or inconclusive.

Lau and Tan (2003) examined a different perspective on the subject by underlying the importance of job satisfaction. They found that budget emphasis has a very weak direct effect on job satisfaction, but a strong indirect effect through job-relevant information and budgetary participation. The results also indicate that job-relevant information has an intervening effect on the relationship between participation and job satisfaction. In an earlier study, Kenis (1979) failed to find significant effect on job satisfaction.

Another area which has attracted attention is organisational commitment. Mathieu and Zajac (1990) described organisational commitment as the bond that links the individual to the organisation. Research studies (e.g. Mathieu & Zajac, 1990) on organisational commitment have operationalised it as affective and continuance commitment. Meyer, Allen & Gellatly (1990) distinguished between the two types of organisational commitment. The study noted that affective commitment is characterized by; a strong belief in and acceptance of the organisation's goals and values and a willingness to exert considerable effort on behalf of the organisation.

Other areas of research which participative budgeting have been linked with include; trust in superior, procedural fairness and goal commitment. According to Lau and Buckland, (2001) and Magner et al. (1995), participative budgeting enhances managers' trust in their superiors. This view was also supported by Lau and Tan (2006) who found that budgetary participation is associated with trust. In another dimension, participation in budgetary setting provided communication opportunity for managers to express their opinions and views in budget decision making (Chenhall & Brownell 1988; Magner et al., 1995). In relation to procedural fairness, subordinates managers' participation in the budgeting decision process has been argued as enhancing employees' perception of the fairness of the budgeting procedure (Libby, 1999; Magner et al., 1995; Wentzel, 2002). This view

was also supported by Sholihin, Pike, Mangena and Li (2011) who found that procedural fairness and interpersonal trust can be linked with budgetary participation and goal commitment. Overall, these studies have suggested that budgetary participation can enhance trust and procedural fairness.

Despite these various outcomes of the use of budget in several organisations, several short-comings have been linked with it (Hope & Fraser, 2003). For example, practitioners have expressed concerns about budgets impeding the allocation of organisational resources to their best uses and encouraging myopic decision making and other dysfunctional behaviours (e.g., Hope & Fraser, 2003; Merchant, 1985a; Onsi, 1973; Schmidt 1992). These studies have suggested that there are behavioural outcomes which may arise from budget participation.

2.3.2 Behavioural Level Outcomes of Budget Participation

Behavioural aspect of the budgeting process received attention through the pioneering research work of Argyris (1952). Following this landmark study, researches were directed towards the concept of budgetary slack (Onsi 1973; Schiff & Lewin, 1968, 1970) and managerial attitude (Merchant, 1981; Mia, 1987; Milani, 1975) as an outcome of budget participation.

Joshi and Abdulla (1995) noted that empirical studies carried out in developed economies suggest that participation in the budget setting process could engender dysfunctional behaviour from the participants. Such dysfunctional behaviour has largely been traced to how slack is built into the budget by subordinate managers. In one of the earliest studies, Williamson (1964) provided evidence that managers might try to influence the budget setting process and obtain budget slack.

The studies of Dunk (1995), Govindarajan (1986), Lukka (1988) and Onsi (1973) argued on the link between participation in budget setting and budgetary slack. This slack was operationalised in terms of easily attainable targets which overstated cost or understated revenues. For example, Lukka (1988) argued that the higher the level of budgetary participation, the more opportunity is created for employees to create bias, thus provoking some control problem such as extent to which subordinates can be controlled by their various supervisors. On the contrary, Cammann (1976); Merchant (1985b); Onsi (1973) provided evidence that participation might lead to a reduction in slack due to the possible communication between managers, in which case subordinates felt less pressure to create slack. And that slack is not necessarily dysfunctional (Davila & Wouters, 2005; Jaworski & Young, 1992). These studies suggest that the findings have been equivocal.

In challenging slack as non-dysfunctional, Lal et al. (1996) criticised the findings of Merchant (1985b) on the basis of non-random sampling technique which the study adopted. Lal et al. (1996) argued that budget participation provoked higher slack. Christensen (1982) also noted that when participation occurs between the better informed subordinates and less informed superiors, and the subordinates' information is used as a basis for their performance, the subordinate has the chance to take advantage of his involvement in setting the budget. This may perhaps create the budgetary slack.

2.3.3 Prior Empirical Findings on Variables Moderating Budget Participation and its Outcomes

Following the inconsistencies in the results of the budget participation (BP) research, studies in this area took another dimension through the arguments that certain variables may affect the relationship between BP and its outcomes. Foremost in this search for explanation are the studies of Brownell (1981, 1982a, 1982b) which identified variables

including culture and other situational variables which moderated the relationship between BP and performance.

The studies of Lau and Buckland (2000) on Norwegians and Tsui (2001) based on Chinese and Caucasian have explored culture as moderating variable in the study of BP and performance. For example, Tsui (2001) noted that the interaction effects of management accounting systems and BP on managerial performance were different. Using a sample of fifty-one Chinese managers and thirty-eight Caucasian managers; and multiple regression analysis, the study found that the difference may be traced to the cultural background of managers. The study noted that the relationship between management accounting system information and managerial performance of Chinese managers is negative for high level BP but positive for Caucasian managers. In a related study in Mexico, Frucot and Shearon (1991) proposed that culture might be an important variable in the budget participation-performance and budget participation-job satisfaction relationships. They tested the interrelationship of budget participation and locus of control (a personality variable) and their impact on job performance and job satisfaction of Mexican managers. They assumed that an organisational system such as budget participation would have different effects in different cultures. They suggested that foreign owned firms “may wish to exercise caution when applying participative budgeting techniques in Mexico (p. 96).”

Under a cultural setting, Lau and Caby (2010) investigated whether the level of budgetary participation among French managers is low, compared to other nations in other cultural settings (Australia, Norway and Singapore). Using a sample of forty-four managers who have completed an executive programme in a French university, their proposition was supported. In an earlier study, Lau and Eggleton (2002)’s proposition that the level of

budgetary participation of Australian managers is significantly higher than that of the Singaporean managers, was supported.

Apart from culture, job relevant information (JRI), environmental uncertainties, and business competition are some of the moderating variables which have been used in prior studies. Leach-López, Stammerjohan and McNair (2007) observed that JRI played a much more important role in explaining the overall relationship between participative budgeting and performance among their Mexican managers working for United States controlled companies in Mexico than it did among US managers who work for US owned companies in the US. In addition, Kren (1992b) found that participation affects performance, not directly, but through JRI.

Jermias and Setiawan (2008) studied the moderating effect of hierarchy and control systems on the relationship between performance and budget participation of three government offices in Indonesia. With the use of moderated regression analysis, the study found a three-way interaction effect on performance between hierarchical levels, control systems and budgetary participation. The study also found support that budget participation has a positive relationship with performance at higher hierarchy level. The study also found that performance and participation relationship is stronger for units that used output control than those who use behavioural control.

In an earlier study, Agbejule and Saarikoski (2006) investigated the association between managerial performance and participation in the budgetary process. The study proposed that the higher the level of cost management knowledge, the more positive will be the relationship between managerial performance and budget participation. Using a sample of eighty-three managers from Finnish industry and multiple regression analysis, the study found that cost management knowledge of managers, moderates the effect of budget

participation on managerial performance. The study reported that the effect of budget participation on managerial performance becomes more positive when managers' cost management knowledge increases. However, the sampling method used in the study was non-probabilistic and it also failed to provide a link with managers' behaviour.

Govindarajan (1986) explored how environmental uncertainty influences the relationship between BP and managerial performance, managers' attitude and motivation (including propensity to budgetary slack, budget usefulness, budget attitude, budget relevance, and budget motivation). The study found that when environmental uncertainty increases, BP has a positive impact on managers' performance, managers' attitude and motivation while a negative impact was found on the propensity to create budgetary slack.

Williams, Norman, and Moore (1990) studied how the interaction of departmental task interdependence and department manager's budgetary behaviours (including budget evaluation and monitoring, budgetary participation, communication informality, and thinking ability change) influenced department performance objectives (including objectives of output performance, system performance, environmental performance, and sub-division performance). The results indicated that there is a significant relationship between budgetary behaviours and performance.

In a different cognitive role for participation, Dunk (1993b) hypothesised that budgetary participation moderated the effects of job relevant task (JRT) on performance because participation acted to clarify job requirements which should ultimately reduce JRT. In addition, Dunk also proposed that participation provided an opportunity for managers to increase their control over job circumstances further reducing JRT. Dunk did not find total support for his propositions, although he did find a positive relationship between budgetary participation and performance.

Goodwin and Kloot (1996) argued on how strategic communication (budgetary participation) influences budgetary response attitude through role ambiguity. They found that when strategies and budgeting process are closely connected, strategic communication and budgetary response attitude are positively and significantly related.

Other factors moderating the impact of BP on MCS outcomes have been suggested in other studies. For example, budget-based incentives (Shields & Young, 1993), goal clarity (Arowomole, 1995), need for independence (Vroom, 1960), risk preference (Johannes, 2009; Young, 1985), self-efficacy (Ni, Su, Chung & Cheng, 2007) and market competition (Chong, Eggleton & Leong (2005).

2.4 BUDGET EMPHASIS (BE)

Accounting controls are an important form of controls existing in many organisations for motivating subordinates and influencing their behaviour (Euske, 1984; Flamholtz, 1979; Merchant, 1985b). Merchant (1985b) noted that the accounting information system is useful for control purpose because it provides information that is useful for motivating, monitoring, and decision making. However different forms of accounting controls may affect subordinates' performance and behaviour differently. Chow, Kato and Merchant (1996) argued that "controls can serve as complements or substitutes for one another, and they also may differ in both magnitude and area of impact" (p. 179). This suggests that organisations may need to implement different forms of accounting controls simultaneously to achieve the desired outcome and behaviour.

Budget emphasis (BE) came to limelight when human involvement in budgeting process began to receive attention from researchers (such as, Birnberg et al., 1983; Briers and Hirst, 1990). In an earlier study of Argyris (1952) on factory supervisors in four production firms, the budget was perceived to be a source of pressure and tension for

them. As a result of this pressure, supervisors were observed to be expressing negative attitudes (dysfunctional behaviour) towards their superiors and budget procedures. From this study, it became apparent that there is the need to complement the knowledge of budget process with knowledge of human behaviour. Similarly, the study also suggested that dysfunctional behaviour is not just a natural human tendency, causing a need to use control, but that dysfunctional behaviour could also be provoked by using budgetary control. In a later study by Harrison (1993), BE became very synonymous with reliance on accounting performance measures (RAPM) when he described RAPM as the extent to which supervisors rely on and emphasize financial targets such as the budget while DeCoster and Fertakis' (1968) study aligned with the term "budget pressure". Studies on BE have taken a special position in the management accounting literature as a result of its impact on several outcomes of management accounting research (Kren & Liao, 1988; Lau et al., 1995; Otley, 1980).

Ni, Su, Chung and Cheng (2007) suggested that although BP is a critical mechanism in management accounting research, other independent variables related to the budgeting system such as budget emphasis (BE) could play a different role. Hence accounting controls, such as the extent of BE in performance evaluation should not be viewed in isolation, but as a complete system of control along with other controls system mechanisms to achieve the organisational objectives (Chow et al., 1996; Flamholtz, 1983; Merchant, 1985a; Otley, 1980; Otley & Berry, 1980).

Callahan and Waymire (2007) investigated whether budgetary control has a relationship with performance by using a sample of large U.S. cities over the period 2003 to 2004. They noted that these cities exhibited tight emphasis on the budget under the same legal and regulatory constraints and due to the balanced budget requirements. The study

proposed that high emphasis on budgetary control, which was measured by level of emphasis on budget variance, has a relationship with performance (which was measured using bond rating). The study found that the effective level of budgetary control is significantly and positively related to bond rating. The study suggested that managers interested in maintaining or improving their municipal bond ratings to manage debt costs may consider paying closer attention to the effective level of budgetary control within the cities.

2.4.1 Organisational or Individual Level Outcomes of Budget Emphasis (BE)

Hopwood (1972) studied the relationship between supervisory style, the level of job related tension (JRT) and dysfunctional behaviour. The supervisory styles identified were budget constraint, profit consciousness and non-accounting style. The study argued that JRT and dysfunctional behaviours of managers who were supervised by budget constraint style were greater than those supervised by the other two supervisory styles. In a replication study conducted by Otley (1978), he designed a five-point scale of supervisory style using a sample of profit-center managers. The study opined that there is a significant relationship between supervisory style and JRT. In related study, Searfoss (1976) found that the degree to which superiors perceived their own rewards to be a function of accounting performance was positively related to their use of accounting performance measures (such as, the budget) in the evaluation of their own subordinates. Searfoss also noted that there is no significant relationship between emphasis on accounting performance measure and motivation.

Hopwood (1974) studied the relationship between managers' propensity to rely on accounting performance measures (budget evaluation style) and their leadership style as measured on the introduction of structure and initiation dimensions. Structure was defined

by managers who have clearly defined roles and detailed job instructions for their subordinates while consideration dimension was measured using personal relationships of subordinates. The findings suggested that budget-related accounting performance measure was higher for structure initiating managers, perhaps because these managers have established and well-defined work procedures and therefore preferred the objectivity associated with accounting data.

Kaplan and Mackey (1992) which examined the relationship between reliance on accounting performance measure (RAPM) and production technology, found that flow shops were more likely to use cost information for performance evaluation than job shops while Simons (1987) found that business strategy was significantly related to RAPM and other control system characteristics. Using the Miles and Snow (1978) typology of organisational strategies, Simons focused on prospectors and defenders framework and found that defender organisations imposed greater budget pressure on managers. In a related study, Merchant (1990) examined whether the differences in profit center strategy has any relationship with RAPM. However, this relationship was not supported.

In an organisational level study, Dunk (1992) investigated the effects of production technology on the efficacy of emphasizing the accounting performance measurement such as budget. Dunk reported that when process automation and emphasis on budgetary control were both high (low), production business unit performance was high (low). He argued that budget control is more effective when activities are structured and cause-effect relations are more certain, as when process automation is high.

The link between budget emphasis and organisational commitment has also been explored (Subramaniam & Mia, 2003). Subramaniam and Mia (2003) noted that budget emphasis (that is, reliance on accounting measures such as the budget) relates negatively

to organisational commitment. The study of Lau (2011) indicated that the relationship between the emphases on meeting the budget and managerial performance is not significant.

Aside from such outcomes as managerial performance, job satisfaction, organisational commitment and strategy, other studies have focused on behavioural outcomes such as budgetary slack (Dunk, 1993a) and job related tensions (Emsley, 2001).

2.4.2 Behavioural Level Outcomes of Budget Emphasis

Extant literature focusing on how people relate to the budget highlighted how managers are drawn towards meeting budgetary targets for reasons that are grounded in both the formality and visibility of accounting controls such as budget emphasis (Hofstede, 1968). According to Van der Stede (2000), human beings naturally desire to appear competent in terms of the criteria by which they are formally assessed. In essence, when organisations decide to emphasize the budget as a criterion for measuring performance, human beings would want to show themselves in a favourable light.

The study of Merchant (1985a) noted that when managers are pressured to achieve their budgeted goals, there is likelihood that they would create budgetary slack while Lowe and Shaw (1968) opined that there is the tendency to incorporate slack into the budget when the achievements of budgeted goals were emphasized. These studies suggested that the main reason for subordinate managers' efforts to build slack in their budgets was to increase their payoff chances. If subordinate managers perceived their rewards as dependent on budget attainment, they would tend to build slack into their budgets through the participation process (Schiff & Lewin, 1968, 1970; Waller, 1988); thus, suggesting that budget emphasis may encourage dysfunctional behaviour (Baiman & Lewis, 1989). However, in another study, Merchant (1985b) found that budget emphasis did not lead to

budget slack, but only if the budget emphasis caused subordinate managers to feel required to engage in budget manipulations to avoid budget overruns.

The study of Baiman and Lewis (1989) argued that budget emphasis in performance evaluation induced the creation of budgetary slack while Christensen (1982) found that in a situation when both the budget emphasis and information asymmetry are high, subordinates are more likely to build a negotiated slack budget with their superiors. Chow et al. (1988) also concluded that if budget emphasis is high and information asymmetry is low, the subordinates will have an incentive to engage in dysfunctional behaviour.

Dunk (1993a) investigated whether participation, the level of private information, and budget emphasis were interactively related to the propensity to create budget slack. The study also investigated whether the level of private information is an indication of the potential seriousness of the slack problem, participation gives managers the opportunity to create slack, and budget emphasis provides the motivation. Dunk proposed that high levels of all three variables should be associated with increased budget slack. However, the interaction found in the study showed that the proposition was not supported. Slack was found to be lowest when all three independent variables were high. Dunk was unable to explain these findings. However, the study of Linn, Casey, Johnson and Ellis (2001) surveyed 1000 managers and argued that budget emphasis is positively associated with the propensity to create budgetary slack. These studies suggest that the relationship between BE and behavioural outcomes have been equivocal.

Emsley (2001) also investigated budget-emphasis in performance evaluation and managers' job related tension. Using a sample of thirty-eight managers, the study noted that the variability in job-related tension can be explained by both budget emphasis and information completeness. The study suggested that there is a direct relationship between

budget emphasis and job-related tension. Fuad (2004) also found support for a strong relationship between budget emphasis and the extent to which managers created slack while Lau (1999) noted that managers' propensity to create slack was associated with emphasis on setting and meeting tight budget targets.

2.4.3 Prior Empirical Findings on Variables Moderating Budget Emphasis and its Outcomes

A number of studies have tried to explain the differences in the appropriateness of BE through the introduction of mediating variables. One of these studies is Hirst (1983) which examined BE, task uncertainty and dysfunctional behaviour. Hirst argued that budget emphasis in performance measurement could cause superior-subordinate conflicts and job related tension (JRT). The study noted that BE is moderated by uncertainty. Specifically, the relationship between BE and JRT is low when uncertainty is high. This study was replicated by Govindarajan (1984) and found that BE was less when environmental uncertainty was high.

Brownell (1985) argued that environmental uncertainty which was defined as degree of complexity and dynamism in the environment would moderate the relationship between RAPM and performance. The study was unable to confirm a difference in the relationship between RAPM and performance but noted that RAPM was negatively related to environmental uncertainty. Ezzamel (1990) found a positive relationship between uncertainty and use of accounting performance measure. This finding is also consistent with an earlier study of Ross (1995).

Another variable which has been used as moderating variable is task uncertainty. Tiessen & Waterhouse (1983) argued that as task uncertainty increases, accounting measures increasingly lose their ability to accurately reflect the actions that will accomplish organisational objectives. In a related study, Imoisili (1989) was unable to verify that task

uncertainty moderated the relation between RAPM, JRT and budget attitude. However, Imoisili noted that managers employing a “budget-constrained” supervisory style reported higher levels of job stress and a more favourable attitude towards the budget.

For studies investigating strategy in RAPM studies, the findings have been mixed. For example, the study of Govindarajan (1988) argued that BE is more appropriate for business units following a low-cost strategy instead of differentiation strategy. Furthermore, in an earlier study by Simons (1987), the use of financial controls was found to be different between firms’ strategy using defender and prospector topology. Govindarajan and Gupta (1985) also found no support for the appropriateness of RAPM using build and harvest topology. However, Merchant (1990) found only partial support. These equivocal findings give little room for strong conclusions (Hartmann, 1998).

Using a sample of hospital administrators and a three-way interaction model, Abernethy and Stoelwinder (1991) studied the effects of system goal orientation (defined as the extent to which subordinate managers identify with their organisation and support its goals) on the relation between RAPM, task uncertainty and performance. The study argued that RAPM would not be effective to evaluate subordinate managers who had not accepted the organisation’s goals. The study found that the “fit” between task uncertainty and RAPM was dependent on system goal orientation.

In another study, Collins, Seiler and Clancy (1984) examined how individual subordinate manager differences affect the usefulness of RAPM and proposed that the behaviour of superiors and peers could explain the performance effects of RAPM. Collins et al. (1984) defined RAPM as the degree of budget emphasis and performance as motivation to achieve the budget. The study found that consistency in budget emphasis between

superiors caused subordinates to perceive less ambiguity about budget goals and enhanced the RAPM-performance relation.

Lau and Eggleton (2002) investigated the effect of national culture on Australian and Singaporean managers' participation and propensity to create slack. The results showed that national culture has a significant effect on budgetary participation. The results also suggested that the effect of national culture on propensity to create slack is also likely to be through the interaction of national culture with budget emphasis and information asymmetry. In a separate analysis of the two categories of managers, Lau and Eggleton found that budget emphasis interacts with information asymmetry to affect the propensity to create slack in both Australia and Singapore. While this interaction is negative for Australian managers, it is positive for Singaporean managers.

Lau and Caby (2010) investigated whether budgetary participation interacts with budget emphasis and task situations to affect managerial attitudes using a sample of forty-four French managers. The study proposed a significant three-way interaction between budget emphasis, budgetary participation and task difficulty affecting managers' job satisfaction. Using questionnaire survey and hierarchical regression analysis, the study found a significant three-way interaction between budget emphasis, budgetary participation and task difficulty affecting job satisfaction.

In a more recent study, the moderating effect of role clarity on the relationship between emphasis in meeting the budget and managerial performance was explored by Lau (2011) using a sample of one hundred and twenty-one managers from manufacturing organisations. The responses were analysed using structural equation model and found that emphasis on financial data such as the budget affected managerial performance through role clarity. However, the study did not provide evidence on the behavioural

consequences of this control system but Lau suggested that research is needed on behavioural consequences for a better understanding of this control system.

2.5 STANDARD OPERATING PROCEDURES (SOP)

In defining management control system (MCS), Simons (1994) used the terms formal, information-based routines and procedures in a study of how top managers use control systems as levers of strategic renewal. The study adopted a process approach and argued that the role of MCS is not limited to strategy implementation but also strategy formulation. Simons' studies of MCS have been approached using diagnostic and interactive use of formal MCS (Simons, 1990; 1994; 1995). Van Iwaarden, Van der Wiele, Williams and Dale (2006) noted that diagnostic controls are characterised by the ability to measure the output of a process, the existence of predetermined standards against which actual results can be compared and the ability to correct deviations from standard. This implies that the superior is more willing to use SOP and will react mostly to exception reports or variations from standard while the nature of SOP makes it of less interest to an interactive style of management superiors as there is little interaction available from the outputs or mechanisms of SOP. However, Soobaroyen (2007) noted that very few studies have considered standard operating procedures (SOP) independently of the other elements and mechanisms of control system.

According to Gray (1993) employee behaviour is determined partly by the established rules, regulations and standards of performance and partly by the work environment, values, norms and traditions of the employees. Gray noted that irrespective of attitudes displayed, employees will generally follow rules and regulations while adopting the behaviours prevailing in the corporate culture on the basis of the way things are done within the organisation.

In another dimension of how SOP can be used within organisations, several studies have also noted that accounting numbers are an integral part of a firm's formal and informal contracts (Christie 1990; Holthausen, 1990; Holthausen and Leftwich 1983; Watts and Zimmerman 1986). For example, Holthausen (1990) noted that a manager may decide to have a procedure or method in place either to enhance the performance of the company or to put him in a favourable light at the expense of other stakeholders.

Macintosh & Daft (1987) defined SOP in terms of written rules, procedures, policies and operating manuals. The study argued that SOP should assist managers on how to react to operational situations within the firm. Macintosh and Daft found that departmental interdependence is related to the emphasis placed on different forms of controls, with standard operating procedures being more intensely used when interdependence was low; budget and statistical reports being important when interdependence was moderate; and all forms of controls (standard operating procedures, budget and statistical reports) being less important when interdependence among departments was high.

Chow et al. (1999) studied the application of culture in the design and use of MCS. This study modelled MCS to include budget participation, standard tightness and performance-based rewards. Drawing from the perspectives of performance-based reward as a type of formal incentive (United Nations Development Programme, 2006), it refers to the existence of written policies, standardised procedures and manuals which specify how to perform activities. This study used the term "structuring of activities" which was described as the existence of written policies, rules, standardised procedures, and manuals which specify how activities should be carried out (Chow *et al*, 1999). The study proposed that structuring of activities would be highest in Taiwanese firm, lowest in firms in United States (U.S.) with Japanese firms in the middle. That is, Japanese firms would

use standard tightness more than U.S. firms with Taiwanese firms having the loosest standard. The study failed to find support for the proposition made. The findings suggested that structuring of activities in the three countries differs as the Japanese firms mean design levels differed significantly from the Taiwanese firms.

In studying organisational control, Chow et al. (1996) investigated the effect of procedural control on data manipulation and management myopia. The study measured procedural control by examining the extent to which approval is required when hiring personnel, spending discretionary monies and making capital expenditures. The study found that U.S. managers appear to engage more in data manipulation and management myopia which he described as dysfunctional effects.

Standard operating procedures have also been studied in relation to companies' adherence to quality. Abas (2006) argued that there is a statistically significant difference in the level of quality culture among three categories of companies. The result revealed that the level of quality culture in organisation with no intention to obtain ISO certification was significantly different from the other group of companies that are already and in the process of obtaining ISO certification. Furthermore, Fisher (1995) studied SOP using procedural system. The study noted that procedural system enhances control over tasks it supports by reducing the discretion of the person performing the task.

The study of Widener (2007) on boundary systems and the diagnostic use of controls noted that SOP could be seen as an example of a boundary system within which organisations should operate. Widener's study proposed that the emphasis a firm places on the boundary system is positively associated with the emphasis the firm places on the diagnostic system. This proposition was supported, therefore suggesting that there is a

logical link between a diagnostic (less interactive) style and more standard operating procedures.

2.6 NON-FINANCIAL MEASUREMENT (NFM)

Another important aspect of MCS which has been identified in the literature is performance control. It is widely recognised that performance measurement systems are tools for achieving organisational objectives (Hatem, 2001). The traditional management accounting literature advocates the use of financial performance measures in evaluating managerial performance. Studies have given several reasons for the use of financial performance measurement. For example, Anthony (1965) and Merchant (1998) have argued that financial performance measures communicate financial objectives; provide an overall summary of performance; do not require top management involvement in operating decisions taken at business units; can play a diagnostic role in deciding whether or not to continue with the current strategies; and do not require additional costs in order to prepare them since they are already available for external financial reporting purposes. However, Banker, Potter and Srinivasan (2002) observed that there has been an increase in the number of firms using non-financial performance measure. This change is because some of the non-financial measures are leading indicators of financial performance (Kaplan and Norton 1992; 2001). Non-financial performance measures therefore provide managers with incentives to improve long-term financial performance. Financial performance measures, on the other hand, are predominately backward-looking and lack predictive ability to explain future performance and therefore provide managers with incentives to improve short-term financial performance (Christe & Zimmerman, 1994). Against this backdrop, researchers have made attempts at providing links between both financial and non-financial measures with outcomes such as organisational performance

(Hoque & James, 2000); role clarity (Hall, 2008); and organisational structure (Hayes & Abernethy, 1980).

2.6.1 Organisational or Individual Level Outcomes of Non-Financial Measurement

With the development of balanced score card (BSC) which incorporates both financial and non-financial measures (Kaplan and Norton, 1992), organisations have focused on more than just financial measures when evaluating the performance of employees. The BSC goes beyond the narrow focus on financial objectives to highlight the non-financial objectives that an organisation must achieve to meet various goals, financial and otherwise.

Hayes and Abernathy (1980) argued that there is emphasis on financial measures such as return on investment (ROI) when companies decentralise their organisational structures. The study emphasised that this structure engenders dependence on short-term financial measures. Hayes and Abernathy noted that innovation is hampered when there is no focus on non-financial performance measures.

The performance measurement (PM) of businesses is believed to create value through the encouragement of the appropriate behaviours, which in turn are supposed to improve performance outcomes. Scott and Tiessen (1999) studied PM and managerial teams. Using respondents cutting across a variety of industrial, financial, government, and not-for-profit organisations, the study proposed that team performance is better when PM are more diverse and include financial and non-financial measures. The study identified such non-financial measures as productivity, quality, service, innovation and personnel. The findings showed that that work teams having more diverse performance measures that are both financial and non-financial measures or more categories of measures, achieve higher self-assessed performance.

Hoque and James (2000) investigated the association between BSC measures (financial and non-financial measures) to size and market factors and impact on organisational performance. Hoque and James suggested that improved performance is associated with greater BSC usage. Davis and Albright (2004) also found that the financial performance of bank branches that had implemented both financial and non-financial PM was superior to those branches in which the measures have not been implemented.

In another study by Van der Veecken and Wouters (2002) on how accounting information systems is used by operations managers in a project company, the use of non-financial information was emphasised. The study reported that operating managers found little use for accounting data on budgeted versus actual project costs, but obtained information from observation of project activities and a few key non-financial metrics. Managers with little contact with operations, however, devote considerable attention to accounting reports as they have limited opportunities for picking up information from actual observations of work being conducted (McKinnon & Bruns, 1992). Similarly, the efforts to make accounting information more relevant for managerial work usually focus on improving its content, for example, non-financial performance measures, balanced scorecards, and activity-based costing systems (Fisher, 1995; Ittner & Larcker, 2003; Kaplan & Norton, 1996).

The study of Hall (2008) also viewed PM from the perspective of comprehensive PM for strategic business units (SBU). The study examined how comprehensive PM would affect performance. He measured comprehensive PM by focusing on non-financial areas such as the extent to which the SBU provide measures that cover the critical area of the organisation and proposed that a positive relationship exists between comprehensive PM and role clarity. The study found a significant positive association. In a related study, Hall

(2010) noted that a single financial dimension which fails to recognise non-financial measure such as market and economic data is less helpful.

Eker and Eker (2009) studied performance measurement in the Turkish manufacturing sector and proposed that non-financial performance measures are associated with firms that have a flexible culture rather than firms with a control culture. The study measured performance as a whole using the balanced score card (BSC) with specific section of the measurement addressing non-financial measures relating to customer, internal business processes and learning and growth. The study found that there is a significant correlation between non-financial performance measures and firms with flexible or control culture.

Grafton, Lillis and Widener (2010) also investigated the role of performance measures and evaluation in building organisational capabilities and performance. The study made use of one hundred and eighty-three completed survey of strategic business unit managers in the manufacturing and service sector in Australia. Using structural equation modelling, the results suggested that to encourage managers to use the multiple financial and non-financial performance indicators increasingly incorporated in contemporary performance measurement systems, it is imperative that performance evaluation schemes are also designed to reflect these measures.

Fakhri, Menacere and Pegum (2011) investigated multiple performance measures in the banking sector. The study proposed that five chosen organisational individuality (e.g. the nature of bank services, the customers' demands, size of bank, and the listing on stock market) impact on the use of performance measures. Using a sample of fifty-five respondents from banks in Libya, the study found that most of the respondents sampled put their emphasis greatly on financial measures as a primary approach to evaluate performance, although several banks are adopting the non financial measures, and they

tend to implement customer related measures and learning and employee growth measures more frequently. The study has also argued that there are significant differences in the use of financial and non financial measures according to banks' characteristics.

2.6.2 Behavioural Level Outcomes of Non-Financial Measurement

Studies have shown that financial measures such as profit and return on capital employed encourage dysfunctional behaviour such as short-termism or myopia (Kaplan, 1984; Marginson, McAulay, Roush & Van Zijl, 2009; Merchant and Van der Stede, 2007). In response to this limitation of financial measures, non-financial measures focusing on such areas as staff attitude, customer satisfaction and quality have been suggested (Ittner, Larcker and Randall, 2003; Sliwka, 2002). However, the existence of sparse literature in this area has recently been identified (Marginson *et al.*, 2009). Management accounting controls, including performance evaluation procedures, should be designed to engender positive attitudes and behaviour (Merchant and Van der Stede, 2003).

Merchant and Van der Stede (2007) opined that management myopia (a dysfunctional behaviour) is consequence of the use of financial results control systems built on accounting measures of performance. Due to this, studies have recommended the introduction of additional, non-financial measures, which include customer satisfaction, quality and staff attitude (see, for instance, Ittner and Larcker, 1998; Sliwka, 2002). This recommendation was based upon the proposition that future orientated non-financial measures overcome the short-term orientation encouraged by backward looking financial measures (Ittner, Larcker and Meyer, 2003). Hassan, Emad and Amal (2010) also found support that non-financial measures cause a reduction in earnings management behaviour.

Marginson *et al.* (2009) investigated the correlates between performance measurement systems and short-termism, a form of dysfunctional behaviour in a Telecommunication

company. Using one hundred usable responses from senior divisional managers of the company, the study sought to establish the extent to which the diagnostic and interactive uses of financial and non-financial measures give rise to short-termism. The study analysed responses using confirmatory factor analysis, scaling, and correlation analysis. Although the results of the analysis revealed that there is a negative relationship between interactive use of non-financial measures and short-termism, diagnostic use of non-financial measures heightens managers' decision to make inter-temporal trade-off choices that prioritise the short term to the detriment of the long term goal of the firm. The study also noted an imbalance in favour of the diagnostic use over the interactive use of non-financial performance measures is associated with short-termism. Despite that this study provided a link between non-financial measures and a form of dysfunctional behaviour (short-termism), the use of respondents from just a single company is a major limitation on the extent of generalisation which can be made from the study of Marginson *et al.* (2009).

2.7 MANAGERIAL DYSFUNCTIONAL BEHAVIOUR (MDB)

Dysfunctional behaviour can be traced to the field-work of Argyris (1952) in which the behavioural aspects of budget use by factory managers in four production firms were identified. The supervisors were observed to have shown negative attitudes towards their superior and budget process. Following this study, dysfunctional behaviour have been studied in relation to budgetary slack (e.g. Onsi, 1973), social withdrawal (Hirst, 1983), smoothing (Birnberg *et al.*, 1983), gaming, data manipulation and short-term orientation (Soobaroyen, 2007; Chow *et al.*, 1996; Merchant, 1990), short-termism (Marginson *et al.*, 2009) and violation of control system rule and procedures (Jaworski and Young, 1992).

2.7.1 Prior Empirical Studies on Conceptualisation of Dysfunctional Behaviour (DB)

In a study of DB, Ashton (1976) examined the unintended consequences of management accounting systems. This study introduced the concept of deviation-amplifying feedback and opined that a “parallel” loop is at work in organisations. Similarly, the study argued that the unintended and dysfunctional consequences generated by the control system may continue to be amplified, hence resulting into a “deviation-amplifying feedback” (Ashton, 1976, p. 289). Robbins (1994) used the term “strange behaviour” and illustrated it with the common example of managers embarking on a spending frenzy to exhaust their budget before a given date, in order to avoid cutbacks in the next period’s allocation.

Birnberg et al. (1983) also identified five categories of dysfunctional behaviour which include; smoothing, biasing, focusing, filtering and illegal acts. A description of each of these is given below:

- (a) **Smoothing:** This has to do with distortion of a reality along a period of evaluation. Smoothing is often associated with postponement of expenses or recognition of revenues in advance so as to present a favourable position. According to Ronen and Sadan (1981), this dysfunctional behaviour relates to the manner with which subordinates utilise the information system by altering the pre-planned flow of data without altering the actual activities for personal benefits. Ferreira and Otley (2006) noted that this can affect the cash flow of the company.
- (b) **Biasing:** This is related to manager’s flexibility in choosing the type of information to be reported. Situations where the manager selects from a set of possible messages or information that is likely to be accepted and is most favourable to him is referred to as biasing (Birnberg *et al.*, 1983) and therefore operationalised as budgetary slack. Oyadomari, Teixeira, Nisiyama & Cardoso

(2010) noted that biasing is often related to performance evaluation based on the comparison between planned and budgeted performances and therefore it can have financial effects (for example, one given manager may earn higher variable wages than another because of target achievement).

- (c) **Focusing:** According to Birnberg *et al.* (1983) focusing occurs when certain aspects of a unit's performance are either enhanced (highlighted) or degraded (hidden). Emmanuel (2002) opined that focusing is related to the emphasis on individual unit performance compared with corporate performance. This may occur when concession is granted to the achievement of a departmental target (attention focusing), even if there might be some loss for the organisation as a whole (Henri, 2006). Henri's study suggested that dynamic tensions could arise from attention focusing.
- (d) **Filtering:** According to Birnberg *et al.* (1983), filtering occurs when there is delay of information or reports. Filtering occurs when the delay results in the communication of only the desired or convenient information. Oyadomari *et al.* (2010) noted that this procedure is common in transfer price negotiations between managers of a single organisation, or even in the event of the presentation of budgets or performed results, when managers omit facts.
- (e) **Illegal Act or Falsification:** This is an action that violates the rule and law of an organisation (Oyadomari *et al.*, 2010; Simon & Eitzen, 1986). Usually, this represents a serious offence.

Merchant (1990) studied two types of dysfunctional behaviour (data manipulation and management myopia) arising from the use of financial controls. The study found that data manipulation and management myopia were obvious and that their occurrence was positively related to the felt pressure to meet financial targets. The study also noted that

environmental uncertainty significantly moderated this relationship. This study, however, provided no evidence that dysfunctional behaviour has a link with performance.

The study of Dunk (1995) noted that there was no evidence that slack and task variability jointly influence performance. The study suggested that slack has a positive role to play in influencing the relationship between task difficulty and subunit performance. Chow, Copper and Waller (1988) also provided evidence from a laboratory experiment on the effect of truth-inducing pay schemes and information asymmetry on the creation of budgetary slack and performance. Slack was also affected by performance capability, apparently through the latter's effect on expected performance.

In a study of U.S. and Japanese managers, Chow, Kato and Merchant (1996) examined the effects of organisational controls on DB (data manipulation and management myopia). The study measured data manipulation in terms of PM manipulation while management myopia was measured in relation to whether controls had discouraged new ideas for expenditures (e.g. product development) or not. Findings from the study supported that when Japanese managers are faced with the same control tightness as their U.S. counterparts, the Japanese managers would not be as short-term oriented or as prone to manipulation of PM as the U.S. managers. However, this study has a couple of drawbacks. Firstly, the sample size used in the study appears too small (just two companies). Secondly, the data collected from the two companies were several years apart and as such, the control systems of the two companies may have changed over the time interval.

Van der Stede (2000) explored the link between budgetary controls and dysfunctional behaviour (budgetary slack and managerial short-term orientation). The study measured budgetary slack by five items and described as intentionally setting the budget targets

lower than their best guess forecast about the future so that the budget becomes easier to achieve. This description is also consistent with the views of Merchant & Manzoni (1989) and Lukka, (1988). On the other hand, Van der Stede's study described managerial short-term orientation as time spent on matters that will appear in the profit and loss statement with both short and long term frame, a description which is similar to the study of Merchant (1990) and Otley (1978). Van der Stede (2000) also provided evidence on the link between DB and performance and found a set of relationships through which poor past performance led to the use of more rigid controls and reduced slack thereby causing short-term orientation. However, this study focused on budgetary controls which are mainly financial in nature without consideration for non-financial control as Merchant (1998) noted that managers may exhibit different behaviours as a result of different control mechanisms that are in place within an organisation. The study of Kren (2003) also provided support that the largest effect on propensity to create slack arose from a direct positive link from environmental uncertainty.

Gibbs, Merchant, Van der Stede and Vargus (2004) also studied the determinants and effects of subjectivity in incentives. This study viewed dysfunctional behaviour based on short-term focus of quantitative measure (that is, formula-based performance measures) and managers' vulnerability to manipulation. They also described short-term focus as the extent to which quantitative PM induce managers to focus on short-term goals rather than long-term goals while manager's vulnerability to manipulation was described as the extent to which the outcome of the formula-based PM can be manipulated. Furthermore, the study observed that the use of subjective bonuses is negatively related to the degree to which the formula bonus exhibits a short-term focus.

Marginson and McAulay (2008) developed an instrument that asked managers to reveal the extent to which they were prepared to sacrifice long-term benefits in order to meet short-term performance targets. The study found no association between short-termism and the importance attached to accounting information within the performance measurement system. The interplay between long-term and short-term was subscribed to by Atherton, Lewis and Plant (2007) which described dysfunctional behaviour as preference for actions in the near-term without due consideration of the long-term consequences. These consequences include; marginalisation of the interests of stakeholders other than shareholders, Market inefficiency, damage to market credibility and impediments to efforts to strengthen corporate governance. However, the extent to which the findings from the study of Marginson and McAulay (2008) can be generalised is limited by its focus on just a single telecommunication company while Atherton, Lewis and Plant (2007)'s study also focused on the financial sector.

Marginson et al. (2009) studied how diagnostic and interactive uses of financial and non-financial measures affect short-termism. In describing short-termism as a dysfunctional behaviour, the study argued that myopia is a synonymous word and that it is a temporal course of action that prioritises achieving the immediate short-term objective which damages the long-term objective of a firm. The study made use of six questions highlighting the tendency for managers to trade-off long-term objective of a firm for the short-term benefits. Findings from the study suggested that this trade-off has a relationship with diagnostic and interactive use of non-financial measure. However, the study failed to provide evidence on the possible moderating effect of environmental uncertainty or strategy on the MCS-MDB link.

2.8 THEORETICAL PERSPECTIVES EMPLOYED IN PRIOR STUDIES OF MCS AND MDB

The equivocal findings from research on the use of MCS and its outcomes have stimulated research efforts in seeking explanations for their functioning within organisations. Such research effort has adopted different theories aimed at guiding natural connections, imaginative connections and develops a more complete cause and effect in management accounting studies (Luft and Shields, 2003). Hoque (2006) noted that accounting researchers use both traditional and emergent perspectives to examine MCS in organisations, therefore leading to increased knowledge and understanding of control systems. While the traditional perspective which has dominated research in management accounting and control views MCS as a means to achieving low cost and efficient operations (Modell, 2007), the emergent perspective seeks to investigate MCS practices from social, cultural and political point of views.

The traditional perspective has included a number of approaches such as rational choice theory (RCT), human relations theory (HRT), agency theory (AT), transaction cost economics theory (TCE) and contingency theory (CT). However, Robinson and Brumby (2005) and Flamoholtz (1983) noted that the theories which have dominated this point of view are human relations theory, agency theory and contingency theory.

The human relations theory emphasises the individual and its role within the organisation based on the notion that management accounting (MA) is influenced by human elements (Hoque, 2006). A major development in the human resource theory is the expectancy theory approach which presupposes that human beings are rational and would therefore make choice based on the one that is beneficial to them (Vroom, 1964). This theory is made up of three elements which are; effort-performance outcome, performance-outcome expectancy and valence. Research studies using this approach have found that human

behaviour is a function of these three elements (see for example, Arowomole, 1995) and have often operationalised it as motivation (DuBrin, 2007) or leadership style which induces participation (Hopwood, 1974). According to Lewis (1983), the human resource theory also emphasises interpersonal relationship among employees with the organisation as this is critical to employee productivity and attainment of organisational goals. Hence, this has led to the development of studies in organisational behaviour and several other disciplines (Davis, 1967, cited in Hoque, 2006) such as psychology, sociology and management science.

A typical research area in which human resource theory has been used in management accounting study is budgeting research (Covaleski, Evans, Luft & Shields, 2003; Hopwood, 1974). For example, Covaleski et al. (2003) opined that human resource theory has been used in studying budgeting within bounded rationality, individual level outcomes and behavioural outcomes. Furthermore, this approach has been used in arguing the positive and negative effects of budgeting process on such outcomes such as performance, satisfaction, motivation and individual behaviour (e.g. Argyris, 1960; Schiff & Lewin, 1970; Otley, 1978).

However, the human resource theory has been argued to have suffered a major set-back because it has not been able to fulfil its expectations on the interaction between accounting and other factors which can influence behaviour (Mullins, 2007). Flamholtz (1983) earlier attributed this set-back to important aspects of accounting process which are over-emphasised rather than the organisational aspects in which the accounting function operates or the complex inter-relationship between organisational processes and accounting systems.

The agency theory (AT) is suggested to provide a more robust theoretical foundation for understanding organisational processes and design from the principal-agent relationship (Subramaniam, 2006). It is used primarily in the fields of accounting (e.g. Demski & Feltham, 1978), finance (e.g. Fama, 1980) and management (Eisenhardt, 1988), thereby covering a large part of organisational and economic studies. This relationship is described by Jensen and Meckling (1976) as an agreement under which the superior (the principal) engage another subordinate (the agent) to perform some services delegated to him (the subordinate). This theory assumes that opportunistic and individualistic interest (e.g. budgetary slack and short-term orientation) of the parties impacts on their efficiency and that this efficiency may be worsened by incomplete information and uncertainty.

Agency theory also assumes that if the goals and desires of the principal and agent are not congruent, behavioural consequences are expected. Eisenhardt (1989) noted that the difficulty associated with ascertaining the actions of the agent could engender problems within the organisation. This lack of knowledge regarding the agent's actions is cited in two aspects of the literature. Firstly, it is assigned to 'moral hazard', which refers to the lack of effort on the part of the agent (that is, shirking). Secondly, it is explained by 'adverse selection', which describes the "misinterpretation of ability by the agent" (Eisenhardt, 1989, p.61). The study of Bouillon, Ferrier, Stuebs and West (2006) noted that the acceptance of the goals of the organisation is very important in achieving MCS that are effective.

The problem is that the principal can only verify that the actions of the agent were appropriate at great costs and through the use of information and monitoring systems. The second problem that might occur in an agency relationship is the problem of risk sharing that arises when the attitude towards risk differs between the principal and agent. The

problem arises because the difference in attitude toward risk might lead to a difference in preferred actions taken (Eisenhardt, 1989; Fama 1980). Eisenhardt (1989) assumes that individuals are risk averse and self-interested, whereas organisations are risk neutral (Shapiro, 2005). For example, in order to avoid risk of underperformance in the budgeting process, individuals can engage in dysfunctional attitudes such as shirking (Eisenhardt, 1989; Gerhart & Rynes, 2003).

Agency theory had been used to explain managers' participation in the budgetary process. For example, the study of Magee (1980) on equilibria in budgeting explained that agents' (subordinates) access to information prior to the preparation of budget increased the anticipated payoff to principal (superior). In essence, the agents' participation gives the principal an opportunity to access information which allows agents to communicate or reveal some of their private information that may be incorporated into the standards or budgets, against which their performance would be evaluated (Baiman, 1982; Baiman & Evans, 1983; Magee, 1980).

The concern of researchers has been that budgetary participation could result in dysfunctional behaviour such as the creation of slack into budgets (Antle & Eppen, 1985). The studies of Brownell (1982b) and Milani (1975) noted that budget participation served as a medium through which subordinate managers influence plans and share in the decision making process with their superiors on matters that affect their areas of responsibility. A number of studies have considered the relationship between budgetary participation and such outcomes as job satisfaction, motivation, performance, job attitudes and many other criterion variables (Arowomole, 1995; Brownell & McInnes, 1986; Chow et al., 1988). For example, Brownell & McInnes (1986) opined that subordinate managers may attempt to negotiate a budget's slack if they have an

expectation gained from earlier participation in the budget setting, and that formal rewards were linked to budget achievement.

Agency theory has also been used in the area of budget emphasis which has to do with the attainment of financial target (the budget). Subramaniam (2006) noted that an accounting-based performance measure is one of the agency variables used in accounting studies. In the principal-agent relationship, the principal is believed to pressure the subordinate (the agent) in achieving the set financial target. Merchant (1985a) noted that budgetary pressure (budget emphasis) from supervisors to their subordinates induced negative attitudes which can inhibit the overall performance of the organisation. Furthermore, when the achievements of budgeted goals were emphasised, the tendency was to build slack into the firm's budgets (Baiman & Lewis, 1989; Lowe & Shaw, 1968; Waller, 1988).

Studies by Hopwood (1972) and Otley (1978) also focused on the bivariate relation between emphasis on accounting-based performance measures and a series of criterion variables. They empirically tested the proposition that dysfunctional behaviour and poor performance are positively related to accounting-based performance measures. While the findings of the two studies are found to be in contrast of each other, the contingency theory has been used in offering explanations for the deviations.

Although the agency theory can be used to explain the outcomes of control systems by self-interested humans, it has been criticised for its narrow focus and its view of humans as opportunistic and individualistic when indeed the principal and the agent operates in a complex environment. Hence, Hirsh, Michaels & Friedman (1987) suggested the use of multiple theories to achieve a more realistic view of organisations. This argument is also supported by Eisenhardt (1989, p. 71) through the suggestion that complementary

theories should be used along with agency theory because it “ignores a good bit of the complexity of organisations”. Therefore, contingency theory has been used to reconcile some of the differences (e.g. Birnberg et al., 1983). Otley (1980) also suggested that contingency theory arose as an expedient tool taken from the organisational behaviour literature to explain contradictory results in empirical accounting research.

The contingency theory is another paradigm which has dominated MA research. Porporato (2011) noted that contingency theory strengthens findings from agency theory by explaining how an appropriate accounting information system can be designed to match the organisation strategy and environment of the firm. While the agency theory in relation to employee responses to MCS suggests that information controls will directly affect dysfunctional behaviour, the contingency theory suggests that employee response depends on contingent factors (Ramaswami 1996). Hence, this suggests that though dysfunctional behaviour can be engendered through control systems, such dysfunctional behaviour can be triggered by contingent factors. Such contingent factors that have been used include; degree of decentralization, environment (Ajibolade, 2010, 2008; Soobaroyen, 2007), organisational structure and technology (Emmanuel, Otley & Merchant, 1990). Furthermore, strategy and business unit performance have also been identified as contingent variables which may affect the control systems that organisations implement and the behaviours that they encourage (Govindarajan, 1988; Govindarajan & Gupta, 1985; Van der Stede, 2000). This relationship is depicted in the model proposed in this thesis.

The emergent perspective in MA studies has been described as a response to the pursuit for efficiency and effectiveness in organisations (Hoque, 2006). Arising from this pursuit are seven different theories or schools of thought which Baxter and Chua (2006)

identified as non-rational, naturalistic, radical, institutional, structurationist, Foucauldian and Latourian schools of thought. However, Molls, Burns & Major (2006) observed that the institutional school of thought has been a major influence to different MA research.

Ajibolade (2008), Chenhall (2003) and Soobaroyen (2007) called for integrating more interpretive and critical elements in MCS research, based on alternative theories and propositions from the institutional paradigm. For example, Soobaroyen (2007) noted that there is the need to understand how institutional variables can influence MCS in organisation; Ajibolade (2008) suggested that since organisations operate within technical environment and institutional environment, some interplay can occur between these two environments which can shape the use of MCS within organisations. Hence, these studies called for the integration of contingency theory with institutional theory in order to have proper understanding of the use of control systems within organisations.

The institutional theory has been described as a valuable theory because it views the organisation beyond just its technical environment by including the institutional environment which spans such areas as legal, professional and regulatory environments (Baxter & Chua, 2003). Furthermore, Munir, Perera and Baird (2011) noted that this has developed into a body of literature encompassing multiple levels of analysis concerning change in organisations. It emphasises how organisations are affected by forces which lie beyond their control (Hoffman, 1999) and is built on the notion that institutional environments are socially constructed (DiMaggio & Powell, 1983). Accordingly, the institutional environment and its participants play key roles in shaping organisational systems, structures and behaviours.

2.9 EMPIRICAL EVIDENCE OF AGENCY THEORY IN MCS STUDIES

Hopmann (2008) noted that managers all over the world are concerned with how to control their organisations and employees by understanding how decisions are incorporated into departmental activities and how goals are achieved at lower levels within the organisation. The study suggested that these processes involve a principal-agent relationship that can be carried out through the use of controls.

Neergard (1998) noted that different managers within the same organisation may understand the meaning of control differently, “just as the same managers at different times might vary in their perception of control” (p. 114). Hence, Eisenhardt (1989) argued that if control mechanisms are in place, as otherwise, the parties are not likely to act in the interest of the organisation as a whole, but rather see their individual gain as most important.

Hopwood (1972) studied the relationship between supervisory style, the level of job related tension (JRT) and dysfunctional behaviour. Using three budgetary supervisory styles (budget constraint, profit consciousness and non-accounting style), the study argued that JRT and dysfunctional behaviours of managers who were supervised by budget constraint style were greater than those supervised by the other two supervisory styles. In a replication study conducted by Otley (1978), he designed a five-point scale of supervisory style using a sample of profit-center managers. The study opined that there is a significant relationship between supervisory style and JRT.

Dunk (1990) also considered the interactive effect of budgetary participation and budget emphasis on managerial performance. Using a sample of 26 managers in northern United Kingdom, Dunk concluded that performance is lower when participation is high (low) and budget emphasis is high (low). Using agency theory, a later study (Dunk, 1993b)

investigated budget emphasis and information asymmetry on the relation between budgetary participation and slack. The responses from 79 Australian managers showed that slack was lowest (highest) when all independent variables were high (low).

Schiff and Lewin (1970) noted that managers can best achieve their personal goals with a slack budget and, thus, are likely to influence the budget process to obtain budgetary slack. Onsi (1973) found strong support for this assertion, as 80 percent of the middle managers in his sample stated that they bargained for slack and top managers indicated that they had at least a “ballpark” idea of the slack in their budgets. In a study of profit center managers, Merchant (1989) found that corporations allowed budgetary slack as a reward for superior performance. Furthermore, some researchers have concluded that the gaming behaviour associated with participative budgeting destroys its usefulness (Jensen 2001; Hansen et al. 2003).

On the other hand, and spurred by the agency paradigm Merchant (1985a) and previous case study evidence of Argyris (1952) noted that one major area of research in budgeting practices is that focused on the link between the extent of the subordinate’s participation in drafting budgets and budgetary slack (see Dunk, 1995; Govindarajan, 1986; Lowe & Shaw, 1968; Onsi, 1973). Lukka (1988) extended the concept of slack to that of ‘budgetary bias’, which then included the deliberate overstatement of expected performance in the budget. The study further contended that a higher degree of participation provided the opportunity to create bias, hence diminishing the superior’s power in controlling the subordinate and which was documented in a later case study by Walker and Johnson (1999).

On the other hand, whilst it is acknowledged that a set budget target can reduce ambiguity amongst managers (Marginson & Ogden, 2005), an imposed budget or target can also put

pressure on the manager to keep to the budget or to appear to keep to the budget (Hopwood, 1980; Merchant & Manzoni, 1989). For example, the manager may engage in the selective use of funds just to keep within the budget, even if it means curtailing key tasks or activities. In essence, the role one associates to budgetary participation can be diversely interpreted according to the theoretical perspectives. For instance, Kren (1997) argued that these interpretations reflect a debate between behavioural-oriented and agency-oriented theories on how management's behaviour can best be controlled. However, as mentioned earlier, there is little published evidence on the resulting impact of budgetary participation on actual activities or actions (Shields & Shields, 1998) but it has been recently argued that the level of participation may signal to the managers that they have the opportunity to operate their activities without much oversight due to their access to private information.

Using agency theory, Evans, Kim, Nagarajan and Patro (2010) argued on the relationship between non-financial measures and behavioural outcomes. The study noted that the relationship suggests that physician practices attempt to counterbalance any short-term behaviour induced by financial performance measures by weighting long-term oriented, forward-looking nonfinancial performance measures. The findings of the study corroborated findings that divisional accounting profit is described as a short-term financial measure that may induce managers to ignore the future economic consequences of their current actions (Horngren & Foster, 1991; Magee, 1986).

2.10 EMPIRICAL EVIDENCE OF CONTINGENCY THEORY IN MCS STUDIES

The contingency theory assumes that the performance of organisations is dependent on the fit between organisation context, structure and process (Drazin & Van de Ven, 1985). This means that the performance or efficiency of organisations is situational, depending on several organisational variables. According to Chenhall (2007), design and usage of MCS are influenced by the context in which they are applied. This theory has been largely applied in the study of MCS (Chenhall, 2003) with focus on several outcomes such as managerial attitude, behaviour and performance (e.g. Ajibolade et al., 2010; Brownell, 1982a; Lee & Modell, 2000; Shields & Shields, 1998).

The contingency theory has been the largest and dominant research stream in organisation theory (Donaldson, 1996) and management control (Hopper & Powell, 1985) from the early 70s. This theory considers that the organisation structures are chosen to improve the efficiency and effectiveness of organisations (Sponen, 2006). The studies of Lawrence and Lorsch (1967) and Thompson (1967) were considered as one of the foremost studies which used contingency theory. While the study of Lawrence and Lorsch (1967) noted that successful firms adapt their degree of differentiation and integration to environmental uncertainty, Thompson's (1967) study suggested that organisations' behaviour is usually rational given the technical and environmental uncertainties in which it operates. Following these two studies, several streams of contingency-based research have sprung up (for example, Bruns & Waterhouse, 1975; Merchant, 1981; Waterhouse & Tiessen, 1978; Watson & Baumler, 1975). Six contextual variables usually used in the contingency literature in MCS (Chapman, 1997; Chenhall, 2003; Fisher, 1995, 1998) are; nature of the environment, complexity of technology, the degree of decentralization, organisational strategy, organisational size and national culture.

Using a sample of twenty-five organisations, Bruns and Waterhouse (1975) provided a structured elaboration of aspects of budgetary control by drawing from contingency perspective. The study examined the organisation structure as being contingent on the context in which the organisation operates using size, technology, and dependence as contextual variables. Two intervening variables, control system complexity and perceived control on the relationship between structure and budget-related behaviour (BRB) were also examined. Findings from the study suggested that the degree of centralization and budgetary control systems complexity to be significantly associated, but no indication of a relationship between structuring of activities and budgetary control systems complexity was found.

Merchant (1981) investigated relationships between size, diversity, decentralization and how different MCS are related to performance, managers' motivation and attitude. Using a sample of nineteen firms in the electronic industry, the study hypothesised that increasing size and diversity creates problems in social control, communication and coordination. Furthermore, it argued that more diverse organisations would tend to decentralize and implement a more administrative-oriented control strategy involving greater formalization and budgeting sophistication. The findings from the study supported the hypothesis that larger, more diverse, decentralized firms tend to place greater emphasis on formal budgeting.

Govindarajan (1984) and Gordon & Narayanan (1984) also investigated the relationship between an organisation's environment and information system. Using a sample of fifty-eight business units, Govindaranjan (1984) proposed that superiors of business units which face higher environmental uncertainty will use a more subjective performance appraisal approach and that a stronger fit between environmental uncertainty and

performance evaluation style would be associated with higher business unit performance. The findings from the study supported both arguments. However, the sample size for the study is rather small and it fails to provide evidence on behavioural outcome of performance evaluation style. Gordon and Narayanan (1984) also examined the relationships among organisation's structure, environment and information system. Findings from the study supported that information systems and organisational structures are both a function of the environment and characteristics of information used for control. However, when environmental uncertainty was controlled for, no such relationships were found. This study also failed to consider behavioural outcome of MCS and it also failed to control for business strategy.

Stuart (1984) investigated the conditions under which control strategies based on management accounting techniques appear to be appropriate. The study also argued for relationships between organisation structure and environmental uncertainty, control information system sophistication and environmental uncertainty. Results from the study revealed that there is no relationship between environmental uncertainty and organisation structure, thus contradicting the findings of Gordon and Narayanan (1984). Stuart's study also ignored the effect of business strategy and behavioural outcome of control system.

Govindarajan (1986) investigated the moderating effect of environmental uncertainty on the relationship between budgetary participation and managerial performance, budgetary participation and managers' attitude and motivation (including propensity to budgetary slack, budget usefulness, budget attitude, budget relevance, and budget motivation). The study found that as environmental uncertainty increases, budgetary participation has a positive impact on managers' performance, attitude and motivation. However, budgetary

participation was found to have a negative impact on the propensity to budgetary slack (a form of dysfunctional behaviour).

Williams, Norman, and Moore (1990) also argued on how the interaction of departmental task interdependence and department manager's budgetary behaviours (including budget evaluation and monitoring, budgetary participation, communication informality, and thinking ability change) influences department performance objectives (including objectives of output performance, system performance, environmental performance, and sub-division performance). Findings from the twenty-two public sector organisations indicated that there is a significant relationship between budgetary behaviour and performance.

While uncertainty has been suggested as a contingent variable which affects managerial dysfunctional behaviour which has largely been based on budgetary slack (e.g. Galbraith, 1973; Govindarajan, 1986; Kren & Liao, 1988), Langfield-Smith (1997) expressed concern that it was so long before strategy was addressed as a variable by the contingency literature. Kattan, Pike and Tayles (2007) also noted that developing economies have in the last decade experienced fluctuating levels of environmental uncertainty. Hence, these studies informed the choice of environmental uncertainty and strategy as two important variables in the study of MCS.

2.10.1 Environmental Uncertainty and the Use of Controls

The external environment has been operationalised in terms of uncertainty, hostility, ambiguity and complexity (e.g. Chenhall 2003, Khandwalla 1977). Environmental uncertainty was described by Kren (2003, p. 153) as the change and variability in the external environment of organisation; a description which is consistent with the study of Tung (1979). Similarly, Andrews (2008) defined environmental uncertainty as a “product

of managers' perceptions of the combined complexity, instability, and unpredictability in the organisational environment" (p. 26). Uncertainty has received the most attention of the external environment in prior empirical contingency studies and has been described as "situations in which probabilities cannot be attached and even the elements of the environment may not be predictable" (Chenhall 2003, p. 137). Despite such attention, very sparse studies in the literature have focused on the possible effect of environment on the MCS-dysfunctional behaviour link (Soobaroyen, 2007).

Hirst (1981) investigated the effect of different uses of accounting performance measures on dysfunctional behaviour of subordinates using situational approach (task uncertainty). The study hypothesised that high emphasis on subordinates' evaluative situation can reduce the incidence of dysfunctional behaviour in situations of low task uncertainty. The study found that a medium to high (medium to low) emphasis on accounting performance measures minimizes the incidence of dysfunctional behaviour in situations of low (high) task uncertainty. In a later study, Hirst (1983) also found that task uncertainty played a significant moderating role in the relationship between budget emphasis and job-related tension but no direct relationship was noted. The study suggested that more research must consider other forms of dysfunctional behaviour.

Hayes and Cron (1988) also investigated the degree of task uncertainty engendered by the zero-based budgeting (ZBB) system and the character of performance measures used to evaluate units that employ ZBB. The paper argued that ZBB materially increases the degree of task uncertainty and found that the increase in task uncertainty creates incentives to engage in dysfunctional behaviour, largely in the form of invalid data reporting.

The relationship between environmental uncertainty, managerial autonomy and size in budget characteristics was examined by Ezzamel (1990). Using a cross-sectional study of eighty-one managers, the study argued that high environmental uncertainty was associated with an emphasis on budgets for evaluation and required explanation of variances but also high participation and interpersonal interactions between superiors and subordinates. Similarly, Merchant (1990) surveyed and interviewed fifty-four managers in two firms and argued that environmental uncertainty moderated the relationship between emphasis on financial control and two consequences of control system (data manipulation and myopia). Findings from the study revealed that managers operating in relatively uncertain environments were significantly more likely to react to budget pressure by pulling profits from the subsequent year into the current year than were those operating in relatively certain environments.

Hassel (1991) investigated the effect of environmental dynamism in multinational companies' emphasis on accounting measures. The study found that there is no indication that tight budget controls would have a negative impact on work conditions of managers facing instability, but foreign managers found it more difficult to accept the evaluative framework if high emphasis is placed on budget controls when their environment is dynamic. However, generalisation of the findings from this study is limited by its restricted sample of multinational companies only. Hassel and Cunningham (1996) also investigated the moderating effect of budget participation under high and low environmental dynamism on the relationship between budgetary control and effectiveness of multinational corporations. Using a sample of sixty-seven respondents cutting across domestic and foreign units in ten countries, the study did not find any moderating impact of subunit managers' ability to influence their budget at any location for any conditions of emphasis on budgetary controls and environmental dynamism.

Hartmann (2005) made a clear distinction between task uncertainty and environmental uncertainty. The study described task uncertainty as the ambiguity caused by the complexity and diversity of tasks performed by the manager. In contrast to environmental uncertainty, task uncertainty is an intrinsic job characteristic that relates to managerial work processes. Using data from a survey of two hundred and fifty managers in eleven organisations, the study proposed that tolerance for ambiguity moderated the relationship between appropriateness of accounting performance measure (such as emphasis on the budget) and uncertainty. The study found that the two types of uncertainty (environmental uncertainty and task uncertainty) have opposite effects on managers' opinions about the appropriateness of accounting performance measure, and that these effects are moderated by tolerance for ambiguity.

Kren (2003) investigated the effect of uncertainty, participation and control system monitoring on the propensity to create slack using forty-nine respondents from forty-four companies. The study found that the largest effect on propensity to create slack arose from a direct positive link from environmental uncertainty. Furthermore, the study suggested that managers engage in dysfunctional behaviour (budgetary slack creation) as a hedge against uncertainties in the environment. However, the study failed to provide whether or not business strategy also moderate the relationship.

2.10.2 Strategy and the Use of Controls

The most important new stream of literature has been that related to the role of strategy (Chenhall, 2003). There have been suggestions that there are important links within the traditional organisational model between strategy and management control systems (Simons, 2000; Langfield-Smith 1997). Empirical research using contingency theory has widely adopted different topologies in the classification of strategy. For example, Miles &

Snow (1978), Porter (1980, 1985) and Gupta & Govindarajan (1984) have drawn the attention of scholars to business unit strategy (BUS) and a variety of other business strategy dimensions. Furthermore, Langfield-Smith (1997) opined that each strategy dimension holds different characteristics related to scope and focus.

Miller and Friesen (1982) investigated innovation in entrepreneurial and conservative firms in fifty-two diverse firms and found that comprehensive controls were positively associated with innovation in conservative firms but a negative association was identified for entrepreneurial firms.

Using contingency theory, Govindarajan and Gupta (1985) studied the relationship between control systems and strategy within diversified firms using fifty-eight strategic business units (SBU). The study identified two strategic topologies; build and harvest topologies. Findings from the study showed that greater reliance on long-term criteria as well as subjective approaches for determining the bonuses of a strategic business unit's general manager contributes to effectiveness in the case of build organisations but hampers it in the case of harvest organisations. They also suggested that the relationship between extent of reliance on short-run criteria and effectiveness is virtually independent of SBU strategy. In Luft and Shields' (2003) study on mapping management accounting, they noted that Govindarajan and Gupta (1985) used a build strategy as a moderator variable. Luft and Shields (2003, p. 194) noted that "a build strategy does not in itself cause higher-performance than other strategies; but it does affect the impact of subjective (versus formula-based) performance evaluation on subunit performance". Therefore, they suggested that future studies need to clearly show whether strategy is used as moderator or independent variable interactions in MCS studies, as lack of clarity can be misleading.

Merchant (1985a) investigated how discretionary program decisions are controlled in decentralised firms. Using unstructured interview and questionnaire survey, the study revealed that decisions are affected by many control systems such as net income targets, expense targets, headcount constraints, requirements for approvals, and directives given by higher management. Merchant (1985a) also noted that the effects of the controls can vary with certain characteristics of the profit centres' situation (e.g. strategy, recent performance), the management style of the company chairman, and the accounting treatment for the expenditure (i.e. whether capitalized or expensed). Specifically, the study found that the control systems used in organisations following a growth strategy were not noticeably different from the control systems used in organisations under a maintain cash flow or selective growth strategy.

However, Simons's (1987) investigation on how firms align their control systems and strategy found that high performing prospectors placed importance on controls, such as forecasting data, tight budget goals and the careful monitoring of outputs, but with minor attention to cost control. The study also suggested that large highly performing prospectors emphasized frequent reporting and the use of uniform control systems, which are modified when necessary. Defender firms used financial control systems less intensively in comparison with prospector firms. While the study also noted that high financial performance has negative relationship with tight budget goals and the use of output monitoring, tight budget goals had a positive relationship with high performance in small defender firms.

Gupta (1987) investigated subjective performance evaluation effectiveness of organisations using build or differentiation strategy. The findings from the study suggested that organisations trying to build market share or to pursue differentiation as a

competitive strategy, openness in corporate-SBU relations and subjectivity in performance assessment were found to be positively associated with effectiveness. In essence, subjective performance evaluation was found to be positively associated with effectiveness in organisations following a build or differentiation strategy.

Govindarajan (1988) argued that SBU employing a strategy of differentiation, low emphasis on budgetary goals (that is, low budget emphasis) during performance evaluations is likely to be associated with high SBU effectiveness. The study also argued that emphasizing budgetary goals during performance evaluations is likely to be associated with high SBU effectiveness in SBU employing a strategy of low cost. Using one hundred and twenty-one respondents, the study found that low emphasis on meeting budgets is associated with high performance in organisations employing a strategy of differentiation. The study also suggested that financial controls such as budget-based evaluation systems need to be deemphasized if American executives are to be innovative and maintain global competitiveness.

Simons (1990) also extended prior studies by investigating how various parts of the management control system (MCS) assist in resolving strategic uncertainties in two competing firms following either a cost leadership or product innovation strategy. Based on a two-year field study, Simon (1990) found that firm that faced strategic uncertainties due to rapidly changing markets used planning and budgeting interactively to set agendas to debate strategy and action plans, while a firm following a low cost strategy within relatively stable environments used the MCS in a programmed rather than interactive way. In essence, top managers of low-cost, high-volume businesses do not pay significant attention to efficiency-related controls like cost accounting systems.

Merchant (1990) investigated the effect of financial control (e.g. budget emphasis) on two types of dysfunctional behaviour (that is, data manipulation and management myopia) using data collected from interview and questionnaire survey of fifty-four profit centre managers. The study also sought to examine the moderating effects of profit centre strategy, environmental uncertainty and supervisor consideration on the relationship between financial control and dysfunctional behaviour. Findings from the study suggested that there is no support that budget emphasis was more appropriate for growth rather than maintain/harvest strategies. However, the study found that managers operating in relatively uncertain environments were significantly more likely to react to budget pressure by pulling profits from the subsequent year into the current year than were those operating in relatively certain environments. Although this is one of the few studies which examines MCS and MDB, the sample size appear very low.

Abernethy and Guthrie (1994) investigated the differences in the design parameters of management information systems in firms adopting different strategic priorities using a sample of forty-nine business unit managers. The findings from the study showed that the effectiveness of the business unit is dependent on a match between the design of the information system and the firm's strategic posture. In essence, management systems that have the characteristics of broad scope systems are found to be more effective in firms employing a prospector strategy than a defender type of strategy. Studies by Chong and Chong (1997); Bouwens and Abernethy (2000) generally supported the hypothesis that broad scope performance measurement systems are associated with higher (self-reported) performance in companies following prospector or differentiation strategies.

Chenhall and Langfield Smith (1998) investigated how combinations of management system and management accounting practices enhance the performance of organisations,

under particular strategic priorities using a sample of one hundred and forty Australian manufacturing companies. Specifically, the study examined budget emphasis as one of the components of “traditional accounting techniques” under particular strategic priorities by using Porter’s (1980) model (Chenhall & Langfield-Smith, 1998, p. 263). The study hypothesised that traditional accounting technique such as budget emphasis would only be beneficial for firms adopting low price strategies. With usable response from seventy-eight firms and the use of cluster analysis, the study found that all traditional accounting techniques including budget emphasis were considered beneficial for almost all companies irrespective of whether they were applying a low cost or differentiation strategy. However, the sampling method used in the study was not random, hence, generalisation of findings is difficult. The use of cluster analysis by this study is also a clear departure from the conventional interaction and moderating approaches adopted in prior studies.

Abernethy and Brownell (1999) demonstrated in a study of sixty-three public hospitals that an interactive style of budgeting can mitigate the disruptive performance effect of the strategic change process. The study also suggested that it is completely possible that the reliance on accounting forms of control will not automatically diminish in importance in different strategic situations, but that their role or use will be different. However, given the single sector coverage in the study, generalisation of the findings calls for some caution. Hence, studies have suggested that a lot remains to be done as to the nature and effectiveness of control systems under different strategies (Hartmann, 2000; Langfield-Smith, 1997).

Van der Stede (2000) examined the relationship between two consequences (budget slack creation and managerial short-term orientation) of a rigid budgetary control. The study

also proposed that the budgetary control styles that organisations implement, as well as the behaviours that they encourage, may be affected by business unit past performance and competitive strategy. Using data from one hundred and fifty-three respondents consisting of business unit managers and structural equation model as method of data analysis, the study found that differentiation business units generally undergo less rigid budgetary controls, which are associated with more budgetary slack, and apparently allow a higher degree of flexibility to respond to changes in the environment.

While examining the use of balanced scorecard (BSC) for evaluating employee performance, Kaplan and Norton (1996) noted that the BSC is a method for using financial and nonfinancial measures to communicate the multiple, linked objectives that a firm must achieve to satisfy its mission and reach its long-term strategic goals. The study noted that BSC systems improve performance by translating strategy into specific objectives and measures that are linked in a causal chain of leading and lagging indicators covering financial and non-financial measures. In a related study, Ittner et al. (2003) investigated the effect of firm's strategy on the relationship between organisational performance and performance measurement practices using data from executives of one hundred and forty financial services firms. The study found that firms making more extensive use of a broad set of financial and non-financial measures than firms with similar strategies have higher measurement system satisfaction.

Contingency theory studies have offered explanations on the link between various conceptualisations of MCS and its outcomes (Ferreira & Otley, 2009), however, this theory has received various criticisms including its fragmentation or piecemeal approach (e.g. Dent, 1990; Fisher, 1995) and its focus on the technical environment of the organisation (e.g. Ajibolade, 2008). Pock (2007) noted that the role of strategy is

significant as it addresses the criticism that contingency-based research presupposes that an organisation's MCS is determined by context and that managers are captured by their operating situation. In reacting to contingency-based criticisms, Siivonen (2007) and Baxter & Chua (2006) suggested that an organisation not only has an operating environment but various institutional environments such as social, legal, professional and regulatory environments.

2.11 INSTITUTIONAL THEORY APPROACH

Institutional theory perspective is becoming a very relevant paradigm in organisation theory and is increasingly being applied in accounting research to study the practice of accounting in organisations. This perspective is made up of several theories such as; old institutional economics, new institutional economics and new institutional sociology (Hoque, 2006). Institutional theory is “a way of thinking about formal organisation structures and the nature of the historically grounded social processes through which these structures develop” (Siivonen, 2007, p. 9). Similarly, it highlights how an organisation interacts with the institutional environment, the effects of social expectations on the organisation, and the incorporation of these expectations as reflected in organisational practices and characteristics (Dillard, Rigsby & Goodman, 2004).

Covaleski, Dirsmith Samuel (2003) also noted that institutional theory extends beyond the focus of contingency theory on an organisation's task environment, which has received much attention in managerial accounting research, to instead focus on its institutional environment. Scott (1987) argued that there is a growing knowledge that no organisation is just a technical system and that many organisations are not primarily technical systems. Scott also noted that all organisations exist in an institutional environment that defines and delimits social reality.

Covaleski et al. (1996) opined that for organisations to survive, attain high level of production and efficiency, it has to conform to social norms of acceptable behaviour. Institutional theory also argues that organisational environments are characterised by rules and requirements which individual organisations must comply with if they are to receive support and legitimacy (Scott & Meyer, 1983). According to Deephouse (1996), this compliance is achieved through isomorphism which the study described as the resemblance of a focal organisation to other organisations in its environment (Deephouse, 1996, p. 1024). Collier (2003) also noted the importance of institutional theory in its ability to locate the organisation within its historical and contextual setting.

Management accounting practices, such as budgeting and case-mix accounting, are seen as ‘rational myths’ that confer social legitimacy upon organisational participants and their actions (Covaleski & Dirsmith, 1988a; Covaleski, Dirsmith, & Michelman, 1993). The technical facet of organisations and existence of rationalised norms that “specify in a rule-like way the appropriate means to pursue them” (Meyer & Rowan, 1977, p. 343) have been identified as contributors to the emergence and dominance of these forms of management accounting practices. Furthermore, the studies of Meyer and Rowan (1977); Scott (1987); DiMaggio and Powell (1983, 1991) have suggested that several areas of an organisation’s formal structure, policies and procedures serve to demonstrate a compliance with institutionalized rules, thereby legitimizing it, to assist in gaining society’s continued support. The institutional environment is argued to be comprised of multiple constituents with potentially conflicting interests who exert pressure over the organisation (DiMaggio & Powell 1983; Modell 2003). These constituents include: key suppliers, resource and product consumers, regulatory agencies, and other organisations or institutions that produce similar services or products (DiMaggio & Powell 1983). It is widely acknowledged in this body of literature that a problem arises for organisational

design and control when inconsistent and conflicting constituent pressures arise (Modell 2002).

Institutional theories assume that a major determinant of organisational structure is the pressure exerted by external and internal constituencies on the organisation to conform with a set of expectations to achieve legitimacy and so secure access to vital resources and long-term survival (Brignall & Modell, 2000). In order to achieve this legitimacy, Meyer and Rowan (1977) noted that organisations have to align with some rationalized institutional myth. DiMaggio and Powell (1983) suggested that this alignment is occasionally manifested by the adoption of structural attributes displayed by other significant organisations through some isomorphic process. According to Kondra and Hinings (1998), institutional theory has taken a variety of semblance but generally the central thrust has been to explain the isomorphism of organisational fields and the establishment of institutional norms.

Of the three prominent classes of institutional theory approach, Molls et al. (2006) identified new institutional sociology (NIS) as having attracted the most influence on accounting research recently. This theory assumes that intra-organisational structures and procedures, including accounting, are mostly influenced by external factor relative to cost-minimising objectives. DiMaggio and Powell (1983), Meyer and Scott (1983), Meyer and Rowan (1977) observed that organisations which operate within related environmental settings are presupposed to be subject to comparable demands towards what is believed as being appropriate behaviour, including its choice and design of internal structures and procedures. This has led to studies using NIS to explain how the adoption of particular accounting systems can be understood in terms of a need to

conform to external pressures as opposed to overriding (rational-optimising) drive for increased internal efficiency (Carmona & Danoso, 2004; Modell, 2002, 2005).

DiMaggio and Powell (1991) opined that congruence between organisational arrangements and imposing institutions is explained through a process by which external institutions permeate internal structures and procedures, often referred to as isomorphism. In essence, it is “the constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions” (DiMaggio & Powell 1983: 149). Molls et al. (2006) identified two components of isomorphism which are competitive isomorphism and institutional isomorphism. DiMaggio and Powell (1983) noted that competitive isomorphism relates to how competitive forces propel organisations towards adoption of least-cost, efficient structures and practices. Competitive isomorphism is the type of change proposed by population ecologists in which optimal forms of organisation are selected out of a population. They suggested that this view assumes a system rationality that dwells on market competition, niche changes and fitness measures (DiMaggio & Powell, 1983). On the other hand, institutional isomorphism emphasizes on how the pursuit of legitimacy and power can bring about mimetic behaviour in a population of firms. However, Molls et al. (2006) noted that NIS advocates have placed lower emphasis on competitive isomorphism. Thus, institutional isomorphism has received greater attention as it is more of a topical interest.

2.11.1 Institutional Isomorphism

DiMaggio and Powell (1983) identified three mechanisms of the isomorphic process which are; coercive isomorphism, stemming from political influence and the problem of legitimacy; mimetic isomorphism deriving from standard responses to uncertainty; and

normative isomorphism emanating from structures and procedures associated with professional bodies.

Coercive isomorphism results from formal or informal pressures on organisations exerted by other organisations upon which they are dependent (DiMaggio & Powell, 1983). Zhou and Delios (2005) noted that the tendency to regulate is being driven by the formal and informal pressures being brought to bear on business organisations. They opined that this pressure is exerted through stakeholder activism and by emerging cultural expectations pressuring corporations to recognize the social environment of the economy. Organisations have become increasingly homogeneous within given domains and organized around rituals of conformity to wider institutional norms (Mascarenhas & Sambharya, 1996). In many cases, it refers to homogeneity pressure from political influence. Such influence may be felt as force, persuasion or invitations to join in collusion (DiMaggio & Powell, 1983).

Mimetic isomorphism is a response to uncertainty. Imitation may occur when the innovation is not well understood (March & Olsen, 1976, cited in Hoque, 2006), the goals are not clear or the environment is turbulent. When the decision to adopt is driven by legitimacy concerns, managers mimic the choices of others in its environment. Although mimesis might not result in the best and the firms may find themselves following choices that have little or nothing to do with either efficiency or goal achievement, they at least ensure the legitimacy of the organisation (DiMaggio & Powell, 1983). When the majority of the firms within the same environment make a certain decision, there is the pressure to conform. Haveman (1993) posited that decision makers in the organisation would mimic the decisions by other organisations that they label as in the same category. Similarly, Beckert (2010) is of the view that if rationally derived templates for optimal institutional

design are unavailable, policy makers turn to related institutions that are seen as more successful or legitimate.

Normative isomorphism stems from elite group behaviour brought about by professionalisation and socialisation (Radaelli, 2000). DiMaggio and Powell (1983) identified two aspects of professionalization which are sources of isomorphism. Firstly, they noted that formal education and legitimation arising from university or professional training induce development of organisational norms among professional managers and their staff. Secondly, they identified trade associations as vehicle for the definition and promulgation of normative rules about organisational and professional behaviour. Perrow (1974) argued that professional and trade associations create a pool of almost interchangeable individuals who occupy similar positions across a range of organisations and possess a similarity of orientation and disposition that may override variations in tradition and control that might otherwise shape organisational behaviour. Mizruchi and Fein (1999) also opined that normative isomorphism contains elements of both institutional theory and network analysis which is driven by common sources of socialization, which could be viewed as common exposure to a set of socially constructed myths, such as the similar worldviews of chief executive officers who attended the same business school or from the dissemination of ideas through social networks, in which members of one organisation directly influence those of another.

2.11.2 Institutional Theory and the Use of Controls

Covaleski and Dirsmith (1988a, 1988b) drew upon institutional theory perspective to examine the manner in which societal expectations of acceptable budgetary practices are expressed, enforced and modified during a period of organisational decline. They examined a large university system's budgeting process both through extensive archival

documents and through in-depth interview with budgetary actors. They described the process of how a university challenged and rejected a traditional budgeting format and protocol between state agencies and the state for allocating state funding when this framework became inconsistent with the university's goals and interests. The study found that the self-interest of the plurality of organisational decision makers (the university, different parties within the university system, the various state agencies, and the legislators) is foremost in the minds of the various parties involved in the budgeting process. They concluded that the common and legitimate language of budgeting is an important vehicle through which societal expectations are enforced and reproduced.

The study of Meyer and Rowan (1991) noted that organisations frequently establish a variety of rational procedures, processes and rules. They argued that the reasons for doing so are not for more efficient organisational decisions or for better outcomes, rather, it is to confer social legitimacy on organisational participants and actions. This view was buttressed by Carruthers (1995) by arguing that organisations gain legitimacy by mimicking formal structures, procedures and rules that enjoyed external legitimacy.

The range of responses to institutional pressures provides insight as to how stakeholder interests might manifest in MCS. Oliver (1991) developed a five typology of strategic responses (acquiescence, compromise, avoidance, defiance, and manipulation) that organisations enact as a result of the institutional pressures that are exerted on them. The study challenged the assumption that organisations passively conform to their institutional environment, and acknowledges that management choice plays a role in shaping organisations, depending on the nature and context of the pressure. The study noted that anticipated losses in efficiency are especially common sources of resistance to state intervention in profit-oriented firms. Oliver also noted that:

as market definitions of effective performance become partially supplanted by criteria of social acceptability and responsiveness to publicly defined rules and procedures, conformity with government regulations is often seen by the organisation to be increasingly incompatible with the technical and economic standards against which firm performance is primarily assessed (Oliver, 1991, p. 165).

Brunsson (1993) identified the budgetary system as a single process that creates formal hierarchical patterns of responsibility within organisations. This is consistent with earlier comments of Cyert and March (1963) who defined budgets as both the substance and result of political bargaining processes that are useful for legitimising and maintaining systems of power and control within organisations. Following these arguments and the analysis of the budget process over a period of three years, Perez and Robson (1999) investigated the budgetary participation process in a subsidiary of a multinational company and described the budget setting process in a company and the institutional processes that led to constant budget revisions and conflicts within the organisation, in a bid to achieve a target acceptable to the head office. The study found cases in which individual managers perceived some behaviour as ritualistic and taken for granted. Furthermore, the study suggested that the behaviour by the various individual managers, especially related to the fact that decisions for budgetary allocations were already made and the budgetary participation was merely a ritual to commit the subordinates to the plan of action. Specifically, they noted that the employees of the departments were cognisant of the reductions they would have to introduce in successive budget review and were 'gaming' the process for that reason (Perez & Robson, 1999, p. 397). Hence, the involvement of subordinates was viewed purely as a legitimating device and that budgetary participation in the organisation may be originating from mimetic isomorphism

(e.g. adhering to competitors' practices) and coercive isomorphism (e.g. required by the parent company). If middle managers perceive that the practice of budgetary participation in their organisation is merely a product of institutional-led pressures, then the extent to which they engage in dysfunctional behaviours, particularly budgetary bias may be increased. This increase in bias may be as a result of the believe that the budget setting process purely meets an appearance of legitimacy and is not used primarily for seeking views from functional managers. This sense of lack of purpose to the process is likely to incite dysfunctional behaviours during the process.

Abernethy and Chua (1996) investigated the role of an organisation's accounting control system (ACS) as part of interrelated control mix using resource dependence and institutional theories. They argued that this control mix is not only contingent on the organisation's technical environment but also on the pressure exerted by the institutional environment. Using a longitudinal field study of a public teaching hospital in Australia, the study focused on three elements of a control system; the governance structure at the board and internal management level, the role of accounting controls and the processes associated with the development of a different management culture. The study found a relationship between the degree of power a constituent possesses and the design of elements of the control mix. Thus, Abernethy and Chua (1996) demonstrated that the control mix of the organisation is a function of its institutional environment which is majorly characterised by funding agencies. They concluded that the accounting control systems failed to serve important role in the planning and control function of the firm and that they are just used to rationalise and supplement other visible elements of the control mix.

Brignall and Modell (2000) investigated the implications of institutional theory for the successful implementation of multidimensional performance measurement and management in U.K. and Scandinavian public sector organisations. The study made use of three stakeholders (funding bodies, professional groups and purchasers) which are capable of exerting power and pressure on the use of performance information in the firm. They argued that little attention has been paid to the social processes whereby such systems are implemented or how they come to be used the way they are as such understanding of systems would be greater enhanced by examining the power relations with various stakeholder groups.

Hussain and Hoque (2002) assessed the role of management accounting in non-financial performance among four Japanese financial institutions-banks. They reported that management accounting has played a key role in measuring performance in different banks in Japan, but its role in non-financial performance measures has been less significant than its role in financial performance measures. The study concluded that non financial performance measures are needed and the contextual factors (such as regulatory control from Central Bank and standards regulatory body) affected the use of non-financial performance measurement in the sample studied. The results from the study also indicated that several institutional forces influenced the banks to implement a particular performance measurement system. Central Bank's regulatory control and accounting standards/financial legislation were found to have exerted the greater influence after economic constraints. They concluded that it is thus important to consider the effects of uncertainty in the economic environment on banks when developing a framework to analyse change in performance measurement systems (PMS). Although the study provided no evidence that management has a tendency to mimic PMS from other banks, Deephouse's (1996) study of commercial banks revealed instances of isomorphism and

found evidence of a relationship between such behaviour and an increased regulatory endorsement. In summary, the integration of the agency theory, contingency and institutional perspectives was adopted in this study of MCS-MDB relationship.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter deals with the methods used in testing the propositions that have been raised in this study. It describes the research design, population of the study, sample selection and procedures for data collection with specific emphasis on validity and reliability of data instruments. It also addresses the analytical tools used in providing answers to the questions raised in the study.

3.2 RESEARCH DESIGN

A cross sectional survey research design was used in this study. This method is considered necessary because of its ability to view comprehensively and in detail the major questions raised in the study. Frankfort-Nachmias and Nachmias (2006) observed that cross sectional survey research design is the major design used in social science fields and is often identified with survey research. In a study assessing the quality of evidence in empirical management accounting research, Van der Stede, Young and Chen (2005) argued that studies in management accounting are largely cross sectional survey. Therefore, in order to elicit detailed responses for this study, survey research strategy was considered appropriate.

3.3 POPULATION AND SAMPLING TECHNIQUE

The population of this study is made up of all companies listed on the Nigerian Stock Exchange (NSE). Presently, there are two hundred and sixteen (216) companies on the Exchange (NSE, 2011). Van der Stede et al. (2005) noted that the selection of sample is important because it signifies the extent to which valid inferences can be drawn from the characteristics of the sample. The study also argued that probability sampling increases

the representativeness of survey results. Hence, this method of sampling was employed in this study.

A sampling frame consisting of one hundred and fifty-six (156) quoted companies having their head office located in Lagos and which have their detailed information available on the NSE Fact-book (2010/2011) was constructed (Appendix 2). This number represents over 72% of the total companies quoted on the Nigerian stock exchange. Therefore, from the sampling frame, a statistically determined random sample of one hundred and twelve (112) quoted companies was selected using random numbers.

$$n = \frac{N}{1 + N(e)^2} \quad \text{.....Equation 3.1}$$

Where:

n = Sample size

N = Population size

e = Level of precision

3.4 DATA TYPES AND DATA INSTRUMENT

Primary and secondary data were used in this study. A questionnaire survey was adopted in obtaining primary data for this study. This was obtained from managerial staff in the finance, accounting or operation function of quoted companies in Nigeria, through a questionnaire which captured the demographic data of the respondents and their opinions with respect to the research questions. It was divided into nine (9) sections.

Section one (1) sought to obtain information on the demographic and subject details of respondents, while section two to section nine captured respondents' view on budget participation (BP), budget emphasis (BE), standard operating procedures (SOP), non-financial measurement (NFM), perceived environmental uncertainty (PEU), business unit strategy (BUS), institutional pressure (IP), and managerial dysfunctional behaviour (MDB). The questionnaire made use of five-point Likert-type scale. The respondents

were required to express their opinion by choosing any value on the five-point scaled data collection instrument. This provided a basis for generating data for the testing of the propositions made in the study.

Secondary data were obtained from the Nigerian Stock Exchange fact-book (2011) and prior literatures on MCS.

3.5 MEASUREMENT OF VARIABLES

Eight (8) variables were examined in this study. These variables are; budget participation, budget emphasis, standard operating procedures, non-financial measurement, perceived environmental uncertainty, business unit strategy, institutional pressure and managerial dysfunctional behaviour. Measures of these variables are included in section two to section nine of the research instrument. The remainder of this section describes each of the variables as contained in the questionnaire.

i. Budget Participation

Section two of the data collection instrument dealt with the measurement of budget participation. This was measured in terms of extent of managers' involvement in securing a budget for the organisation. The six items in the study of Milani (1975) that measured on a seven-point Likert-scaled instrument was adapted in this study with slight modification. This instrument has been used extensively in prior studies (Lau, Low & Eggleton, 1995; Naser, Mah'd, Nimer & Al-okdeh, 2011; Nouri & Parker, 1998; Parker & Kyj, 2006, Tsui, 2001). The instruments attempted to determine involvement in and influence of the persons on the budget process (Nouri & Parker, 1998). Evidence from these studies suggests that this measurement has enjoyed high internal reliability. This study adopted a five-point Likert-scale measurement ranging from strongly disagree to

strongly agree. The scores obtained on the six (6) items used in measuring budgetary participation on a five-point scale were summed up and averaged to obtain a summary.

ii. Budget Emphasis

Section three of the questionnaire centred on measurement of the level of emphasis placed on the attainment of budget figures. Following the study of Hopwood (1972) on how the budget is used in evaluating employees, several studies have adopted the eight-item measure of superiors' evaluation style. Such studies (Brownell, 1982; Brownell & Dunk, 1991; Brownell & Hirst, 1986; Lau, Low & Eggleton, 1995; Otley, 1978) have operationalised this variable by asking respondents to rank or rate the extent of emphasis that their superiors place on meeting the budget. Unlike the rating system often used in Likert-scaled measurement, Brownell (1982) noted that the ranking system used in his study suffered some setbacks as some respondents failed to complete rank ordering properly. Due to this shortcoming, later researchers (e.g. Brownell, 1985; Brownell & Dunk, 1991; Lau, Low & Eggleton, 1995) have used the Likert-scale to measure each of the items in the instrument. Therefore, this study adapts Otley (1978) measure of budget emphasis which measured concern with costs and meeting the budget using six items which were measured on a five-point Likert-scale. The seven (7) items used in measuring BE were summed and averaged to obtain BE index which were classified as either low or high using a cut point of 3.0 for high BE.

iii. Standard Operating Procedures

Section four of the questionnaire was designed to measure respondents' perception on the extent to which the organisation has standardised and documented procedures for some activities within the firm. Insight into this measurement was obtained from the study of Macintosh and Daft (1987) which examined the extent to which the existence of "written

rules, procedures, policies and operating manuals are used to guide managers as they administer their departments” (p. 51). Specifically, the study used the number of books and number of pages to measure extent of standard operating procedures. In contrast, the study of Chow et al. (1999) operationalised standard operation procedures based on the extent to which activities are structured within a company. The study’s eight item measurement used a seven-point Likert-scaled questionnaire to evaluate the extent to which manufacturing companies have written manual on the eight classes of activities. Hence, this study adapted Chow et al. (1999)’s measure with consideration for the variety of sectors that are in the Nigerian Stock Exchange. This gave rise to the five items contained in section four of the data collection instrument. Furthermore, the various scores on these items which were measured on a five-point scale were summed up and averaged to obtain the summary index for SOP.

iv. Non-Financial Measurement

Section five of the questionnaire dealt with obtaining information to evaluate the extent of attention attached to non-financial performance measures. Seven items were used to measure the level of attention given to non-financial measures on a five-point Likert-scale. These items include customer service, product quality, work attitude, employee relations, team playing, share of market and product innovation. This measure was designed based on Kaplan and Norton (1992) who identified non-financial measures relating to customers’ perspective, internal business perspective and innovation and learning perspective. This measure has also been used in recent MCS studies (e.g. Chow & Van der Stede, 2006; Ittner & Larcker, 2003). For example, Chow and Van der Stede (2006) operationalised non-financial measures using three broad measures cutting across internal operating measures, employee-oriented measures and customer-oriented

measures. The various scores on these items which were measured on a five-point scale were summed up and averaged to obtain the summary index for NFM.

v. Perceived Environmental Uncertainty

Section seven of the questionnaire was designed to measure the perception of respondents on the level of environmental uncertainty facing the companies. The measure was adapted from the study of Milliken (1987) which identified three major types of uncertainty which are state, effect and response uncertainties. Several studies (Ajibolade, 2008; Chenhall & Morris, 1986; Ezzamel, 1990; Gul, 1991; Merchant, 1990) have used one or combination of these three types of uncertainties. More recently, the studies of Ashill and Jobber (2009); Sund (2008) have adapted these three types of uncertainties.

vi. Business Unit Strategy

Section six of the questionnaire dealt with obtaining information on the business strategy of the companies. The five-item, five-point Likert-scale measurements used in this study were adapted from Porter's (1980) low cost and differentiation typology. This measure has also been used in the study of Govindarajan and Fisher (1990); Van der Stede (2000). These studies have operationalised this variable by requesting respondents to position their business relative to competitors in terms of product selling price or marketing sales, research and development expenditures, product quality, brand image and product features.

vii. Institutional Pressure

The extent to which the operating situation of a company is affected by pressures from the activities of external organisations and institution was measured in section ten of the data instrument. Previous studies have identified parent company relationship, international affiliation, regulatory agencies, professional associations, trade associations

and the media publicity as agents of institutional pressure (Brignall & Modell, 2000; DiMaggio & Powell, 1983; Modell, 2002). Hence, this study adapted a seven-item, five-point Likert-scale measure to examine the extent to which various external bodies influence the operating activities of companies.

viii. Managerial Dysfunctional Behaviour

Section eight of the questionnaire dealt with managerial response to control systems. The study relied on the insights gained from previous studies of Birnberg et al. (1983); Jaworski and Young (1990); Merchant (1990); Sobarooyen (2007); Van der Stede (2000). For example, Jaworski and Young (1992) measured dysfunctional behaviour using five-item on a five-point Likert-scaled instrument. The study identified gaming and information manipulation as types of dysfunctional behaviour. While gaming relates to altering of performance indicators, information manipulation relates to smoothing, filtering and biasing. Therefore, this study used seven items to measure dysfunctional behaviour with the first four items relating to information manipulation and the last three items to gaming. Although the study of Merchant (1990) noted reluctance in answering questions relating to dysfunctional behaviour, this study avoided the use of the word “dysfunctional” in section eight of the data instrument. This study also ignored the active tense (e.g. “I tend to ignore/avoid/make appear.....”) which were used in the study of Jaworski and Young (1990) in order to elicit candid opinion and reduce the reluctance of respondents associated with Merchant’s study. The scores obtained were summed up and averaged to obtain a summary index. An index of 3.0 and above was considered high while score below 3.0 was considered low.

3.6 VALIDATION OF DATA COLLECTION INSTRUMENT

Since the measure of variables utilized in this study were derived from measures designed and measured in developed economies, it was considered necessary to validate these instruments within the Nigerian context. A pilot study was conducted as Saunders et al. (2007) suggested that pilot study would minimise the likelihood of respondents having problems in answering the questions, allow some assessment of the questions' validity and the reliability of the data collected.

3.6.1 Content Validity

The research instrument was subjected to content validity to ensure that the content of the instrument measures the variables investigated in the study. Copies of the initial draft of the questionnaire were given to two Ph.D. accounting students and two management consultants. Their useful recommendations assisted in producing the second draft of the questionnaire. Following this first modification, ten revised copies were given to post-graduate lecturers in accounting and business related disciplines. Their useful suggestions assisted in producing the final instrument for data collection as provided in Appendix 1.

3.6.2 Reliability of Research Instrument

The Cronbach alpha is a popular reliability test (Kwok and Sharp, 1998). As suggested by Nunnally & Bernstein (1994), a Cronbach alpha score exceeding 0.70 is deemed satisfactory, in terms of construct reliability. Therefore, Cronbach alpha was used to test the reliability of the instrument after obtaining data from a pilot study. Twenty copies of the questionnaire were administered to managers that enrolled in a Master of Business Administration evening programme of the University of Lagos. Sixteen copies of the questionnaire were duly completed and returned. The results were used to obtain the statistical measures of the construct validity of each of the variables measured in the

study. The results of the Cronbach alpha showed that there is a satisfactory internal reliability above 0.70 for each of the multi-scaled items in the study as shown in Table 3.1.

TABLE 3.1 RELIABILITY STATISTICS OF THE MEASURES OF VARIABLES OF INTEREST

Variable	Number of Items	Cronbach Alpha
Budgetary Participation (BP)	6	0.818
Budget Emphasis (BE)	7	0.889
Standard Operating Procedures (SOP)	5	0.799
Non-financial Measurement (NFM)	7	0.760
Business Unit Strategy (BUS)	5	0.805
Perceived Environmental Uncertainty (PEU)	11	0.757
Institutional Pressure (IP)	7	0.831
Managerial Dysfunctional Behaviour (Gaming)	3	0.736
Managerial Dysfunctional Behaviour (Information manipulation)	4	0.839
Managerial Dysfunctional Behaviour (Gaming and Information Manipulation)	7	0.856

Source: Research Survey, 2011

3.7 DATA COLLECTION PROCEDURE

Four copies of the questionnaire were given to each of the one hundred and twelve companies sampled. The study targeted two groups of managers from accounting/finance and other operating units such as production, operations sales or marketing. Respondents from these functional areas were expected to possess sufficient knowledge on the use of MCS within the organisation. Given the need that the two groups of respondents needed to be well represented, two copies of the questionnaire were given to each group in a company, making a total of four (4) respondents from each company using stratified random sampling procedure. Therefore, given the sample size of one hundred and twelve companies, a total of four hundred and forty-eight copies of the questionnaire were administered. The addresses of the companies were obtained from the 2011 Fact-book of the Nigerian Stock Exchange.

3.8 METHOD OF DATA ANALYSIS

The data collected were analysed using both descriptive and inferential statistics. The descriptive method described the demography of the respondents using percentages, frequency count, mean, standard deviation, minimum and maximum.

Answers were provided to the propositions made for this study with the use of Pearson product moment correlation, independent samples t-tests, linear regression, multiple regression analysis and moderated regression analysis (MRA). The simple linear regression models designed for the study to test linear relationship between each of the MCS variables and MDB are shown in equations 1 to 4 while the moderating effects of PEU, BUS and IP on the relationship between MCS and MDB in quoted companies in Nigeria are presented in equations 5, 6 and 7.

Equations 1 to 4 were used to test the relationship between MDB and each of the MCS variables (BP, BE, SOP, NFM). Equations 5, 6 and 7 present moderated regression models (MRA) to explain the moderating effect that each of contingency and institutional variables (PEU, BUS and IP) would have on the relationship between MCS and MDB. Jaccard, Turrissi and Wan (1990) observed that the terminology used to describe this model is sometimes referred to as “Interaction effects in multiple regressions” or Moderated Regression Analysis (MRA) (Hartmann and Moers, 2003; 1999).

$$Y_{G,IM} = \beta_o + \beta_1 BP + \varepsilon \text{ -----Equation 1}$$

$$Y_{G,IM} = \beta_o + \beta_1 BE + \varepsilon \text{ -----Equation 2}$$

$$Y_{G,IM} = \beta_o + \beta_1 SOP + \varepsilon \text{ -----Equation 3}$$

$$Y_{G,IM} = \beta_o + \beta_1 NFM + \varepsilon \text{ -----Equation 4}$$

$$Y_{G,IM} = \beta_o + \beta_1 X_1 + \beta_2 X_{2a} + \beta_3 X_1 X_{2a} + \varepsilon \text{ -----Equation 5}$$

$$Y_{G,IM} = \beta_o + \beta_1 X_1 + \beta_2 X_{2b} + \beta_3 X_1 X_{2b} + \varepsilon \text{ -----Equation 6}$$

$$Y_{G,IM} = \beta_o + \beta_1 X_1 + \beta_2 X_{2c} + \beta_3 X_1 X_{2c} + \varepsilon \text{ -----Equation 7}$$

where:

Y = Managerial Dysfunctional Behaviour (grouped into G,IM)

G,IM = Gaming and Information manipulation

BP = Budget Participation

BE = Budget Emphasis

SOP = Standard Operating Procedures

NFM = Non-financial Measurement

X₁ = MCS variables combined

X_{2a} = Perceived Environmental Uncertainty (PEU)

X_{2b} = Business Unit Strategy (BUS)

X_{2c} = Institutional Pressure (IP)

$X_1X_{2a,b,c}$ = Interaction effect of $X_{2a,b,c}$ on the relationship between Y and X_1

β_o = Intercept or constant

$\beta_1, \beta_2, \beta_3$ = Regression Coefficients

ε = Error term

Finally, in carrying out the analysis, Statistical Package for Social Sciences (SPSS) version 15 was used.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 INTRODUCTION

This chapter deals with the presentation of the results obtained from the data gathered for the study. The chapter also describes the results obtained in line with the various propositions raised in the study. This study which focused on the impact of four MCS mechanisms on two forms of MDB and moderating effects of contingency and institutional paradigms on this relationship made seven propositions and were tested. The results of these propositions are presented in this section under each of the research questions raised in the study.

4.2 ANALYSIS OF QUESTIONNAIRE RESPONSE RATES

Out of the four hundred and forty-eight copies of the questionnaire distributed to the one hundred and twelve companies surveyed, a total of three hundred and thirty-two copies were returned. This represented about seventy-four percent (74%) of the total copies administered. However, of these copies retrieved, twenty-one copies of the questionnaire were either not completely filled or completion request denied. Hence, they were excluded from the analysis. A total number of three hundred and eleven (311) copies of the questionnaire were used for data analysis. This represented an effective response rate of sixty-nine percent (69%). Table 4.1 presents a summary of the distribution of questionnaire and responses received.

TABLE 4.1 DISTRIBUTION AND RETRIEVAL OF COPIES OF QUESTIONNAIRE

Details	Number	Valid Percent
Administered	448	100%
Returned	332	74.11%
Not returned	116	25.89%
Not used for analysis	21	4.69%
Used for analysis	311	69.42%

Source: Research Survey, 2011

4.3 RESPONDENTS' DEMOGRAPHIC DATA

An analysis of respondents' position indicated that ninety (90) respondents representing above twenty-eight percent (28%) of total responses are from the top management cadre while one hundred and forty-eight (148) respondents representing about forty-eight percent (48%) are from the middle level management. The remaining seventy-three (73) respondents were drawn from the operational level management. This last group of respondents accounts for over twenty-three percent (23%) of the total number of responses obtained. A summary of this result is detailed in Table 4.2.

TABLE 4.2 RESPONDENTS' POSITION IN ORGANISATION

	Frequency	Percent	Valid Percent	Cumulative Percent
Top Level Management	90	28.9	28.9	28.9
Middle Level Management	148	47.6	47.6	76.5
Operational Level Management	73	23.5	23.5	100.0
Total	311	100.0	100.0	

Source: Research Survey, 2011

Responses from the departments surveyed indicated that the account/finance department accounted for one hundred and fifty-eight (158) respondents representing about fifty-one percent (51%) of total responses. One hundred and fifty-three (153) respondents representing about forty-nine percent (49%) are from other functional departments (e.g. operations and marketing). Table 4.3 presents a summary of this result.

TABLE 4.3 RESPONDENTS' DEPARTMENT

	Frequency	Percent	Valid Percent	Cumulative Percent
Accounts/Finance	158	50.8	50.8	50.8
Others (e.g. Operations or Marketing)	153	49.2	49.2	100.0
Total	311	100.0	100.0	

Source: Research Survey, 2011

A further analysis was conducted to check whether respondents have the required work experience within the firm to enable them give their opinion on the use of MCS mechanism. The result of this analysis is presented in Table 4.4. Respondents with less than six years of experience accounted for thirty-one percent (31%) of the total responses received. In absolute terms, this represents ninety-five (95) respondents. One hundred and sixty-four (164) respondents had experience spanning six (6) to ten (10) years, representing about fifty-three percent (53%) of responses while fifty-two (52) respondents representing about seventeen percent (17%) have working experience above ten (10) years.

TABLE 4.4 RESPONDENTS' EXPERIENCE

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 6 years	95	30.5	30.5	30.5
From 6 – 10 years	164	52.7	52.7	83.3
From 11 – 15 years	49	15.8	15.8	99.0
Above 15 years	3	1.0	1.0	100.0
Total	311	100.0	100.0	

Source: Research Survey, 2011

Analysis of respondents' qualification indicated that all respondents had at least a first degree with some even possessing higher degrees and/or a professional qualification as shown in Table 4.5. This suggests that respondents are sufficiently knowledgeable to express their opinion on the use of MCS within their various organisations.

TABLE 4.5 RESPONDENTS' QUALIFICATIONS

	Frequency	Valid Percent
1st Degree (B.Sc./B.A/HND)	311	100.0
Postgraduate Degree (M.Sc./MBA/Ph.D.)	167	53.7
Professional Accounting Qualification	147	47.3
Others Professional Qualifications (NIM, MPR)	87	28.0

Source: Research Survey, 2011

4.4 ANALYSIS OF DATA ON RESEARCH QUESTION ONE

Research question one borders on the extent to which managers are involved in the setting of budgets for their organisation or department. In order to generate valid response to this research question, analyses were carried out by using the responses obtained from the six items in section two of the questionnaire. The questions centered on the opinion of the respondents on the extent of their involvement in budgeting activities within their organisation. The descriptive statistics of responses are presented in Table 4.6. For example, the extent to which managers are involved in securing the final budget figures for their departments (Item 6) had the highest mean score of 3.83 while other statements are relatively above 3.50. On the average, all budget participation statements as shown in Table 4.6.1 have a mean score of 3.63, thus suggesting that respondents' participation in budget setting is high.

TABLE 4.6: DESCRIPTIVE STATISTICS ON BUDGET PARTICIPATION

Item	Budget Participation Statements	Mean	Std. Deviation	Min.	Max.
1	My participation in securing an appropriate budget for my department is very important.	3.54	.939	1	5
2	My opinion has a great influence in the final budget figures for my department.	3.66	.722	2	5
3	I can freely state my opinion concerning the departmental budget to my supervisor.	3.54	.680	2	5
4	I am actively involved in the budget setting process of my department.	3.58	.923	2	5
5	My supervisor regularly seeks my opinion when there is the need for budget setting or revision of budgets for my department.	3.65	.711	2	5
6	The final budget figures secured for my department is derived from my level of involvement.	3.83	.883	2	5

Source: Research Survey, 2011

TABLE 4.6.1 SUMMARY PANEL ON MEASURES OF BUDGET PARTICIPATION

Mean	3.6340
Std. Deviation	.57072

Source: Research Survey, 2011

4.5 ANALYSIS OF DATA ON RESEARCH QUESTION TWO

4.5.1 Descriptive Analysis

The study sought to examine the extent to which budget participation influences gaming and information manipulation in quoted companies in Nigeria through the second research question. The summary of the descriptive statistics on budgetary participation is shown in Table 4.6.1 while Table 4.7 is the summary of the descriptive statistics on managerial dysfunctional behaviour (gaming and information manipulation) using section eight of the questionnaire. There were indications from Table 4.7 that gaming of job-related activities does occur in organisations as respondents' opinion showed that certain job-related activities can be safely ignored when they are not monitored by a supervisor (Item 5) which has the highest mean score of 3.80. Each of the mean score for the seven (7) items measuring managerial dysfunctional behaviour was found to be above 3.50. On the average, all the seven (7) items measuring managerial dysfunctional behaviour had a mean score of about 3.62 while items measuring gaming and information manipulation had a mean score above 3.70 and 3.50 respectively. This suggests that some form of dysfunctional behaviour is exhibited by managers.

TABLE 4.7: DESCRIPTIVE STATISTICS OF MEASURES OF MANAGERIAL DYSFUNCTIONAL BEHAVIOUR

Item	Managerial Dysfunctional Behaviour	Mean	Std. Deviation	Min.	Max.
1	Managers often place high importance on the success of getting a generous budget for the department.	3.58	.685	2	5
2	Managers have a tendency to avoid being the bearer of bad news when presenting information to upper level management.	3.50	.761	1	5
3	Managers often choose to present information that makes their own performance look better.	3.57	.920	2	5
4	Managers have a tendency to emphasise data that reflects favourably upon them when presenting information to upper level management.	3.56	.917	2	5
5	Certain job-related activities can be safely ignored when they are not monitored by a supervisor.	3.80	.949	1	5
6	Managers can slightly adjust tasks to reflect performance with organisational goals.	3.79	.928	1	5
7	Control systems do not cause managers to be particularly concerned with improving efficiency in their area of responsibility.	3.54	.680	2	5

Source: Research Survey, 2011

TABLE 4.7.1 SUMMARY PANEL ON MANAGERIAL DYSFUNCTIONAL BEHAVIOUR

Information Manipulation	Mean	3.5498
	Std. Deviation	.52472
Gaming	Mean	3.7128
	Std. Deviation	.57706
Managerial Dysfunctional Behaviour	Mean	3.6197
	Std. Deviation	.46024

Source: Research Survey, 2011

4.5.2 Test of Hypothesis

In order to test hypothesis one, the items used in measuring budgetary participation (BP) and managerial dysfunctional behaviour (MDB) were summed up and averaged separately as shown in the summary panel in Tables 4.6.1 and 4.7.1 respectively. These variables were then used in testing the hypothesis below.

H₀₁: There is no significant difference between the level of MDB of quoted companies with high level of budget participation and those with low budget participation.

Correlation analysis was first used to determine the level of relationship between BP and MDB. A significant relationship between budget participation (BP) and each of the variables; gaming (DBG) and information manipulation (DBIM) should be revealed through a significant correlation between BP and managerial dysfunctional behaviour (MDB). The results of correlation analysis indicated that BP has a significant relationship with information manipulation ($r=0.59$), gaming ($r=0.54$) and the combined variable; managerial dysfunctional behaviour ($r=0.67$). This is significant because $p < 0.01$ as shown in Table 4.8.

TABLE 4.8: CORRELATION MATRIX

	BP	DBIM	DBG	MDB
Budget Participation (BP)	1			
Information Manipulation (DBIM)	.588(**)	1		
Gaming (DBG)	.541(**)	.410(**)	1	
Managerial Dysfunctional Behaviour (MDB)	.674(**)	.872(**)	.804(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Research Survey, 2011

A simple linear regression model as shown below was used in explaining the extent of influence that BP has on MDB.

$$Y_{G,IM} = \beta_0 + \beta_1 BP + \varepsilon \quad (\text{from Equation 1})$$

The regression was found to be statistically significant at $p < 0.05$ with about 45% of the variation in MDB explained by BP as evidenced by the R^2 value of 0.454 (Table 4.9) and a regression coefficient value of 0.543 in Table 4.9.2.

TABLE 4.9: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674(a)	.454	.452	.34060

a Predictors: (Constant), BP

Source: Research Survey, 2011

The fitness of the model can also be explained by F-ratio (F) in Table 4.9.1. According to Field (2000), a good model should have a large F-ratio. In this study, F is 257.04, which

is also significant at $p < 0.001$. Hence, conclusion can be drawn that the regression model significantly predicts managerial dysfunctional behaviour.

TABLE 4.9.1: SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.818	1	29.818	257.042	.000(a)
	Residual	35.846	309	.116		
	Total	65.664	310			

a Predictors: (Constant), BP; Dependent Variable: MDB

Source: Research Survey, 2011

Furthermore, the coefficients of the model and t-values are shown in Table 4.9.2. The probability that the t-values occurred by chance is less than 0.001. Hence, the study concluded that budget participation makes a significant contribution ($p < 0.001$) to predicting managerial dysfunctional behaviour. The equation now took the form of:

$$Y_{G,IM} = 1.645 + 0.543BP \dots\dots\dots \text{Equation 4.1}$$

TABLE 4.9.2: SUMMARY OF REGRESSION COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.645	.125		13.193	.000
	BP	.543	.034	.674	16.033	.000

Dependent Variable: MDB

Source: Research Survey, 2011

The study went further to examine whether significant differences in MDB as a result of the level of budget participation using independent samples t-tests. Prior to conducting

this test, Field (2000) suggested that Levene's test should be conducted to check whether the assumption of homogeneity of variance has been violated. The results of this test showed that the variances are not significantly different, hence, suggesting that the assumption of homogeneity of variance has not been violated. This is evidenced by a non-significant Levene's test with $p > 0.05$ (Panel b, Table 4.10). The results also showed that the extent of MDB in high BP setting is different from MDB of companies having low BP. This difference was found to be statistically significant at $p < 0.05$ (Table 4.10). Hence, the null hypothesis of no significant difference was rejected. Since the Panel for the group statistics revealed that the mean for high BP setting was greater than the mean for low BP setting, we can conclude that companies with high BP were able to engage in MDB significantly than participants with low BP ($t(309) = -8.568$, $p < 0.05$) as shown in Table 4.10 (Panel b). Overall, BP is associated with statistically significant increase in MDB.

TABLE 4.10: SUMMARY OF DIFFERENCE BETWEEN MEANS OF MDB OF COMPANIES BASED ON LEVEL OF BP

Panel a: Group Statistics

	BP	N	Mean	Std. Deviation	Std. Error Mean
MDB	Low	28	2.9796	.41279	.07801
	High	283	3.6830	.41453	.02464

Panel b: Independent Samples Test

	Levene's Test		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Diff.	
								Upper	Lower
MDB	.047	.829	-8.568	309	.000	-.70340	.08290	-.86493	-.54187

Source: Research Survey, 2011

4.6 ANALYSIS OF DATA ON RESEARCH QUESTION THREE

4.6.1 Descriptive Analysis

Research question two addressed the extent to which budget emphasis (BE) influences gaming and information manipulation in quoted companies in Nigeria. All mean scores for items measuring BE were found to be above 3.0. For example, the importance that supervisors attach to explanations of deviations from budget and suggestions for corrective action (Item 6) were found to have a mean score of 3.68 (Table 4.11). On the average, all seven (7) items measuring BE as shown in Table 4.11.1, had a mean score slightly above 3.50, suggesting that emphasis place on budget is relatively high.

TABLE 4.11: DESCRIPTIVE STATISTICS ON BUDGET EMPHASIS

Item	Budget Emphasis	Mean	Std. Deviation	Min.	Max.
1	Adverse deviations from the budget always give my supervisor a lot of concern.	3.68	.912	2	5
2	My interaction with other staff members is more cordial when I attain my financial targets.	3.41	.748	2	5
3	My contribution to company profits is always emphasised by my supervisor	3.60	.742	1	5
4	My inability in meeting the budget always attract some form of penalty	3.49	.901	2	5
5	Achievement of my financial target is more recognised than other efforts that I put into my work.	3.46	.829	1	5
6	My explanations of deviations from budget and suggestions for corrective action are of value to my supervisor.	3.68	.773	2	5
7	My supervisor attaches much importance to meeting budgeted financial targets in the short-run.	3.63	.941	2	5

Source: Research Survey, 2011

TABLE 4.11.2: SUMMARY PANEL ON MEASURES OF BUDGET EMPHASIS

Mean	3.5645
Std. Deviation	.48304

Source: Research Survey, 2011

4.6.2 Test of Hypothesis

In testing hypothesis two, the items used in measuring BE and MDB were summed up and averaged separately as shown in the summary panel in Tables 4.11.1 and 4.7.1 respectively. These variables were then used in testing the hypothesis below.

H₀₂: There is no significant difference between the level of MDB of quoted companies with high level of budget emphasis and those with low budget emphasis.

The relationship between the variables was investigated by carrying out a correlation analysis. The results of correlation analysis indicated that BE is significantly associated with information manipulation ($r=0.70$, $p < 0.05$), gaming ($r=0.41$, $p < 0.05$) and the combined variable; managerial dysfunctional behaviour ($r=0.68$, $p < 0.05$) as shown in Table 4.12.

TABLE 4.12: CORRELATION MATRIX

	BE	DBIM	DBG	MDB
Budget Emphasis (BE)	1			
Information Manipulation (DBIM)	.701(**)	1		
Gaming (DBG)	.408(**)	.410(**)	1	
Managerial Dysfunctional Behaviour (MDB)	.676(**)	.872(**)	.804(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Research Survey, 2011

A simple linear regression model as stated below was used in explaining the extent of influence that BE has on MDB.

$$Y_{G,IM} = \beta_0 + \beta_1 BE + \varepsilon \text{ (from Equation 2)}$$

The regression was found to be statistically significant at $p < 0.05$ with about 46% of the variation in MDB explained by BE as evidenced by the R^2 value of 0.457 in Table 4.13 and a regression coefficient value of 0.644 in Table 4.13.2

TABLE 4.13: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676(a)	.457	.455	.33980

a Predictors: (Constant), BE

Source: Research Survey, 2011

The fitness of the model is explained by a large F-ratio and $p < 0.05$, suggesting that the model is significant. As shown in Table 4.13.1, F is 259.716, which is also significant at $p < 0.05$. Hence, conclusion can be drawn that the regression model results in a significant prediction of managerial dysfunctional behaviour.

TABLE 4.13.1: SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.987	1	29.987	259.716	.000(a)
	Residual	35.677	309	.115		
	Total	65.664	310			

a Predictors: (Constant), BE; Dependent Variable: MDB

Source: Research Survey, 2011

The coefficients of the model and t-values are shown in Table 4.13.2. The probability that the t-values occurred by chance is less than 0.001, suggesting that the variable reflect genuine effects. The study concluded that budget emphasis (BE) makes a significant contribution ($p < 0.001$) to predicting managerial dysfunctional behaviour. Hence, BE has significant influence on MDB.

The equation now took the form of:

$$Y_{G,IM} = 1.325 + 0.644BE \dots\dots\dots \text{Equation 4.2}$$

TABLE 4.13.2: SUMMARY OF REGRESSION COEFFICIENTS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.325	.144		9.217	.000
	BE	.644	.040	.676	16.116	.000

Dependent Variable: MDB

Source: Research Survey, 2011

The independent samples t-tests were used in examining whether significant differences in MDB can be explained by the level of budget emphasis (BE). Levene's test was conducted to check whether the assumption of homogeneity of variance is not violated. The results of this test showed that the variances do not differ significantly, hence, suggesting that the assumption of homogeneity of variance has not been violated. This is evidenced by a non-significant Levene's test with $p > 0.20$ (Panel b, Table 4.14). The results also showed that the extent of MDB in companies with high BE setting is different from MDB of companies having low BE. This difference was found to be statistically

significant at $p < 0.05$. Therefore, the null hypothesis of no significant difference was rejected. The study concludes that companies with high BE engaged in MDB significantly than participants with low BE since Panel a, in the group statistics revealed that the mean for high BE setting was greater than the mean for low BE setting ($t(309) = -5.885$, $p < 0.05$) as shown in Table 4.14.

TABLE 4.14: SUMMARY OF DIFFERENCE BETWEEN MEANS OF MDB OF COMPANIES BASED ON LEVEL OF BE

Panel a: Group Statistics									
	BE	N	Mean	Std. Deviation	Std. Error Mean				
MDB	Low	22	3.0909	.37550	.08006				
	High	289	3.6599	.44129	.02596				

Panel b: Independent Samples Test									
	Levene's Test		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Diff.	
								Upper	Lower
MDB	1.269	.261	-5.885	309	.000	-.56900	.09668	-.75924	-.37877

Source: Research Survey, 2011

4.7 ANALYSIS OF DATA ON RESEARCH QUESTION FOUR

4.7.1 Descriptive Analysis

The fourth research question was aimed at investigating the extent to which standard operating procedures (SOP) influences gaming and information manipulation in quoted companies in Nigeria. The descriptive statistics for items measuring SOP are presented in Table 4.15. All mean scores for items measuring SOP were found to be above 3.0 except

item 5 measuring whether documented procedures or manuals are in place for making tradeoffs within the line items of department's current period budget. This item had a mean score of 2.60. The various scores on these items were summed up and averaged to obtain the summary panel in Table 4.15.1 while Table 4.7.1 is the summary of the descriptive statistics on managerial dysfunctional behaviour (gaming and information manipulation). On the average, the five (5) items measuring SOP had a mean score of about 3.60, suggesting the existence of standard operating procedures in the sampled organisations.

TABLE 4.15: DESCRIPTIVE STATISTICS ON MEASURES OF STANDARD OPERATING PROCEDURES

Item	Standard Operating Procedures	Mean	Std. Deviation	Min.	Max.
1	Recruitment, promotion and employee disengagement.	4.14	.746	2	5
2	Purchase of capital equipment.	3.68	.684	2	5
3	Procurement of operating inputs or materials	3.64	.617	3	5
4	Operating procedures, time plans and schedules.	3.86	.781	2	5
5	Making tradeoffs within the line items of your department's current period budget.	2.60	1.411	1	5

Source: Research Survey, 2011

TABLE 4.15.1: SUMMARY PANEL ON MEASURES OF STANDARD OPERATING PROCEDURES

Mean	3.5852
Std. Deviation	.42492

Source: Research Survey, 2011

4.7.2 Test of Hypothesis

H₀₃: The level of SOP has no significant influence on the extent of MDB (gaming and information manipulation).

The relationship existing between standard operating procedures (SOP) and managerial dysfunctional behaviour was investigated by carrying out a correlation analysis. A significant influence of SOP on MDB and each of the variables; gaming and information manipulation should be revealed through a significant correlation between SOP and MDB variables.

The results of correlation analysis (Table 4.16) indicated that information manipulation had no significant relationship with standard operating procedures. This relationship is negative and significant at $p < 0.05$ ($r = -0.02$, $p > 0.05$). There is also evidence that gaming had no significant relationship with standard operating procedures ($r = 0.10$, $p > 0.05$); and the combined variable; managerial dysfunctional behaviour had no significant correlation with SOP ($r = 0.04$, $p > 0.05$). In summary, SOP had a non-significant negative correlation with information manipulation, the relationship between gaming and the combined variable; MDB had positive but non-significant correlation.

TABLE 4.16: CORRELATION MATRIX

	SOP	DBIM	DBG	MDB
Standard Operating Procedures (SOP)	1			
Information Manipulation (DBIM)	-.019	1		
Gaming (DBG)	.101	.410(**)	1	
Managerial Dysfunctional Behaviour (MDB)	.042	.872(**)	.804(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Research Survey, 2011

4.8 ANALYSIS OF DATA ON RESEARCH QUESTION FIVE

4.8.1 Descriptive Analysis

Research question five bordered on the extent to which non-financial measurement influences gaming and information manipulation in quoted companies in Nigeria. The seven (7) items in section five of the questionnaire were used in providing answer to this research question.

The descriptive statistics is as shown in Table 4.18 with all mean scores for items measuring non-financial measurement found to be above 3.0. The Table shows that the use of non-financial measures such as customer service, attitude to work, product innovation and extent of market share or market penetration are used in evaluating the performance of managers. Customer service had the highest mean score of 4.27 while product innovation had the least mean score of 3.20.

The ranking of the means of these items indicated that customer service was ranked as the most frequently used non-financial measurement by supervisors when subordinates are being evaluated while product innovation is the least used item for evaluating managers' performance. This suggests that non-financial measures are used by the companies. On the average, the seven (7) items measuring NFM had a mean score of about 3.66 as shown in Table 4.18.1.

TABLE 4.18: DESCRIPTIVE STATISTICS ON NON-FINANCIAL MEASUREMENT

Item	Non-financial Measurement	Mean	Std. Deviation	Min.	Max.	Mean Rank
1	Customer service	4.27	.755	3	5	1 st
2	Deviations from quality of work or output	3.86	.781	2	5	3 rd
3	Attitude to work	3.87	.754	2	5	2 nd
4	Employee relations	3.43	.858	1	5	5 th
5	Team playing	3.59	.790	2	5	4 th
6	Extent of market share or market penetration	3.43	.877	2	5	5 th
7	Product innovation	3.20	1.123	1	5	6 th

Source: Research Survey, 2011

TABLE 4.18.1: SUMMARY PANEL ON MEASURES OF NON-FINANCIAL MEASURES (NFM)

Mean	3.6647
Std. Deviation	.40992

Source: Research Survey, 2011

4.8.2 Test of Hypothesis

The items used in measuring NFM and MDB were summed up and averaged separately as shown in the summary panel in Tables 4.18.2 and 4.7.1 respectively. These variables were then used in testing hypothesis four which is re-stated below.

H₀₄: Non-financial measurement has no significant influence on the extent of MDB (gaming and information manipulation).

The relationships between the variables were investigated by carrying out a correlation analysis. Significant influence of NFM on MDB and each of the variables; gaming and information manipulation should be revealed through a significant correlation between NFM and MDB variables. The results of correlation analysis indicated that information manipulation, gaming and the combined variable; managerial dysfunctional behaviour has no significant correlation with NFM. These relationships are non-significant at $p > 0.05$ (Table 4.19).

TABLE 4.19: CORRELATION MATRIX

	NFM	DBIM	DBG	MDB
Non-financial Measurement (NFM)	1			
Information Manipulation (DBIM)	.045	1		
Gaming (DBG)	.093	.410(**)	1	
Managerial Dysfunctional Behaviour (MDB)	.079	.872(**)	.804(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

Source: Research Survey, 2011

4.9 MULTIPLE REGRESSIONS ANALYSES OF DATA ON RESEARCH QUESTION SIX

In order to evaluate the sixth research question bordering on whether contingency variables moderate the relationship between MCS and MDB of quoted companies in Nigeria, moderated regression analysis (MRA) was carried out. Thus, the models in equations 5 and 6 in chapter three were fitted for hypotheses 5 and 6 respectively.

Field (2000) noted that when conducting regression analysis, several assumptions must be true. Two of the most commonly addressed assumptions are normality assumption and multicollinearity assumption. In order to evaluate the normality assumption, normal plots was used. There is visual indication from this plot that the variables are normally distributed as shown in Appendix 3. In assessing the multicollinearity of variables, Field (2000) noted that variance inflation factor (VIF) and tolerance values can be used. Myers (1990) suggested that VIF values greater than 10 should cause for multicollinearity concern while Tolerance value below 0.2 indicates a possible multicollinearity problem (Menard, 1993).

The results indicated no violation of this assumption as shown in Table 4.21. For example, budget participation had a Tolerance value of 0.47 and a Variance Inflation Factor (VIF) of 2.14 while business unit strategy had a Tolerance value of 0.76 and a VIF of 1.321.

TABLE 4.21: MULTICOLLINEARITY RESULT

	Collinearity Statistics	
	Tolerance	VIF
Budget Participation (BP)	.468	2.135
Budget Emphasis (BE)	.506	1.975
Standard Operating Procedures (SOP)	.733	1.363
Non-financial Measures (NFM)	.435	2.300
Perceived Environmental Uncertainty (PEU)	.703	1.423
Business Unit Strategy (BUS)	.757	1.321
Institutional Pressure (IP)	.420	2.379

Source: Research Survey, 2011

4.9.1 Evaluation of the Significance of Explanatory Variables

Following the non-existence of serious concern for multicollinearity issue, the main effect of MCS variables in predicting MDB was examined. This assisted in estimating the contributory power of each of the MCS predictor variables. Using the forward method in regression analysis, the results showed that about 56.4% of the variations in MDB were explained by two of the predictor variables (BP and BE) as shown in Table 4.22. However, SOP and NFM made no significant contribution to MDB. This result is significant at R^2 value of 0.564 (Table 4.22) and a regression coefficient of 0.401 and 0.335 for BP and BE respectively (Table 4.22.2).

TABLE 4.22: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676(a)	.457	.455	.33980
2	.751(b)	.564	.562	.30475

a Predictors: (Constant), BE

b Predictors: (Constant), BE, BP

Source: Research Survey, 2011

The fitness of the model is also explained by the high F-ratio of 199.519 in the second model in Table 4.22.1. This model is significant at $p < 0.05$, suggesting that the model significantly results in better prediction of MDB.

TABLE 4.22.1: SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.987	1	29.987	259.716	.000(a)
	Residual	35.677	309	.115		
	Total	65.664	310			
2	Regression	37.060	2	18.530	199.519	.000(b)
	Residual	28.605	308	.093		
	Total	65.664	310			

a Predictors: (Constant), BE;

b Predictors: (Constant), BE, BP

c Dependent Variable: MDB

Source: Research Survey, 2011

TABLE 4.22.2 SUMMARY OF REGRESSION COEFFICIENTS(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.325	.144		9.217	.000
	BE	.644	.040	.676	16.116	.000
2	(Constant)	.973	.135		7.204	.000
	BE	.401	.045	.421	8.830	.000
	BP	.335	.038	.416	8.727	.000

a Dependent Variable: MDB

Source: Research Survey, 2011

Budget emphasis (BE) and budget participation (BP) have beta values of 0.401 and 0.335 with t-values of 8.830 and 8.727 respectively. These values are significant at $p < 0.01$ as shown in Table 4.22.2. Since, SOP and NFM have no significant prediction powers; the new regression model is now defined as:

$$Y_{G,IM} = .973 + .335BP + .401BE \dots\dots\dots \text{Equation 4.3}$$

4.9.2 Results of Moderating Effects of Perceived Environmental Uncertainty on Managerial Dysfunctional Behaviour

Hypothesis H₀₅ was proposed in order to provide answer to the sixth research question. The hypothesis was examined using moderated regression analysis (MRA). MRA is one of the “dominant statistical formats to predict contingency effects” (Hartmann & Moers, 2003, p. 803). In order to run the regression, the block form was used by entering the predictor variables; management control system (MCS) variables combined and perceived environmental uncertainty (PEU) together as one block while the product of these variables were entered in another block. Although some studies such as Abernethy

and Brownell (1999) encouraged the use of mean centering before the product term is used, it however depends on the level of multicollinearity in the variables. Hence, since the issue of multicollinearity is not within unacceptable level, product terms were used.

The hypothesis was stated as:

H₀₅: Level of perceived environmental uncertainty (PEU) has no significant moderating effect on the relationship between management control system variables and extent of MDB.

The results indicated that the moderating variable is statistically significant at $p < 0.05$. The model with the moderating variable explained 58% of the variation in MDB. The moderating effect of PEU accounted for a low but significant increase in R^2 at $p < 0.05$ ($\Delta R^2 = 0.013$, $\Delta F = 9.435$, Sig. $\Delta F = .002$). Details of this result are presented in Table 4.23.

TABLE 4.23: MODEL SUMMARY ON MODERATING EFFECT OF PERCEIVE ENVIRONMENTAL UNCERTAINTY (PEU)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
3	.761(c)	.580	.576	.29985	.013	9.435	1	307	.002

c Predictors: (Constant), MCS (BP, BE), PEU, MCS*PEU

Source: Research Survey, 2011

The model fitted for the moderating effect of PEU is also significant with F-value of 141.119 at $p < 0.01$ as shown in Table 4.23.1 while Table 4.23.2 shows the coefficient of the moderating variable which is also significant. Therefore, conclusion can be drawn that the moderating effect of PEU results in better prediction of MDB.

4.23.1 SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	38.063	3	12.688	141.119	.000(c)
	Residual	27.601	307	.090		
	Total	65.664	310			

c Predictors: (Constant), MCS (BP, BE), PEU, MCS*PEU

d Dependent Variable: MDB

Source: Research Survey, 2011

TABLE 4.23.2: SUMMARY OF REGRESSION COEFFICIENTS(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
3	(Constant)	3.944	1.034		3.816	.000
	MCS	-.179	.293	-.185	-.613	.540
	PEU	-.825	.294	-.749	-2.809	.005
	MCS*PEU	.253	.082	1.394	3.072	.002

a Dependent Variable: MDB

Source: Research Survey, 2011

4.9.3 Results of Moderating Effects of Business Unit Strategy on Managerial Dysfunctional Behaviour

Hypothesis H₀₆ was also proposed in order to provide answer to the sixth research question using moderated regression analysis (MRA). The block form was used by entering the predictor variables; management control system (MCS) variables combined and business unit strategy (BUS) together as one block while the product of these variables were entered in another block. The hypothesis took the form:

H₀₆: Business unit strategy (BUS) has no significant moderating effect on the relationship between management control system variables and extent of MDB.

The results indicated that the interaction term is statistically significant at $p < 0.05$. The model with the interaction term explained 57.3% of the variation in MDB. The moderating effect of BUS accounted for an increase that is significant at $p < 0.05$ ($\Delta R^2 = 0.162$, $\Delta F = 116.573$, Sig. $\Delta F < .001$). Details of this result are presented in Tables 4.24, 4.24.1 and 4.24.2.

TABLE 4.24: MODEL SUMMARY ON MODERATING EFFECT OF BUSINESS UNIT STRATEGY (BUS)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
3	.757(c)	.573	.568	.30233	.162	116.573	1	307	.000

c Predictors: (Constant), MCS (BP, BE), BUS, MCS*BUS

Source: Research Survey, 2011

The model fitted for the moderating effect of BUS is also significant with F-value of 137.130 at $p < 0.01$ as shown in Table 4.24.1. Table 4.24.2 shows the coefficient of the moderating variable which is also significant. Therefore, conclusion can be drawn that the moderating effect of BUS results in better prediction of MDB.

TABLE 4.24.1: SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	37.603	3	12.534	137.130	.000(c)
	Residual	28.061	307	.091		
	Total	65.664	310			

c Predictors: (Constant), MCS (BP, BE), BUS, MCS*BUS

Dependent Variable: MDB

Source: Research Survey, 2011

TABLE 4.24.2: SUMMARY OF REGRESSION COEFFICIENTS(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
3	(Constant)	3.436	.392		8.772	.000
	MCS	.008	.109	.005	.076	.940
	BUS	-.669	.077	-.605	-8.733	.000
	MCS*BUS	.197	.018	1.088	10.797	.000

a Dependent Variable: MDB

Source: Research Survey, 2011

4.10 ANALYSIS OF DATA ON RESEARCH QUESTION SEVEN

The extent to which institutional pressure (IP) moderate the relationship between MCS and MDB was examined using moderated regression analysis (MRA). The model in equations 7 in chapter three were fitted for hypotheses 7. To carryout this test, the block form was used. The hypothesis took the form below:

H₀₇: Institutional pressures (IP) have no significant moderating effect on the relationship between MCS variables and extent of MDB.

The results indicated that the interaction term is statistically significant at $p < 0.05$. The model with the interaction term explained about 57.3% of the variation in MDB. The moderating effect of IP accounted for significant increase in R^2 at $p < 0.05$ ($\Delta R^2 = 0.174$, $\Delta F = 125.415$, Sig. $\Delta F = .000$). Details of these results are presented in Tables 4.25, 4.25.1 and 4.25.2.

TABLE 4.25: MODEL SUMMARY ON MODERATING EFFECT OF INSTITUTIONAL PRESSURE (IP)

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
3	.757(c)	.573	.569	.30210	.174	125.415	1	307	.000

c Predictors: (Constant), MCS (BP, BE), IP, MCS*IP

Source: Research Survey, 2011

TABLE 4.25.1 SUMMARY OF FITNESS OF THE MODEL

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	37.647	3	12.549	137.504	.000(c)
	Residual	28.017	307	.091		
	Total	65.664	310			

c Predictors: (Constant), MCS (BP, BE), IP, MCS*IP

Dependent Variable: MDB

Source: Research Survey, 2011

The model fitted for the moderating effect of IP is also significant with F-value of 137.504 at $p < 0.05$ as shown in Table 4.25.1 while Table 4.25.2 shows the coefficient of the moderating variable which is also significant. Therefore, conclusion can be drawn that the moderating effect of IP results in better prediction of MDB.

TABLE 4.25.2: SUMMARY OF REGRESSION COEFFICIENTS(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
3	(Constant)	2.802	.194		14.440	.000
	MCS	-.058	.034	-.279	-1.709	.089
	IP	-.343	.122	-.295	-2.799	.005
	MCS*IP	.217	.019	1.224	11.199	.000

a Dependent Variable: MDB

Source: Research Survey, 2011

In summary, the results provided varying degrees of support for the seven propositions that were made in the study.

CHAPTER FIVE

DISCUSSION AND INTERPRETATION OF FINDINGS

5.1 INTRODUCTION

This chapter deals with the discussion and interpretation of the findings obtained from the analysis of data. The first subsection discusses the findings on individual variables analysed in the first four tests of hypotheses. The second subsection discusses the effect of moderating variables on MCS-MDB relationship. This second subsection comprises of three hypotheses.

5.2 FINDINGS ON INDIVIDUAL VARIABLES ON MCS-MDB RELATIONSHIP

The study set out to investigate the relationship between MCS variables (budget participation, budget emphasis, standard operating procedures and non-financial measures) and MDB (gaming and information manipulation). With research question one, the study sought to provide evidence on the extent to which managers are involved in the setting of budgets for their organisation or department. The findings indicated that budget participation in these companies is above the cut-point for BP index with a mean score of 3.63. Five (5) of the six (6) items used by Milani (1975) had mean score that is above 3.0 indicating a fairly high level of involvement in budget setting. This finding is consistent with the findings of Chong and Chong (2002) and Sobarooyen (2007) which also recorded a high participation of managers in budget setting. Both studies also used the Milani's (1975) six item measure. While the study of Chong and Chong used a seven-point scale, Sobarooyen used a five-point scale. However, Sekaran (2003) indicated that a five-point scale is acceptable just like any other, and that an increase from five to seven or nine points on a rating scale does not improve the reliability of the ratings. A mean score of 5.135 out of 7.00 was reported in Chong and Chong while Sobarooyen reported a mean

score of 4.2199 out of 5.00, both indicating a high level of managers participation in budget setting. The finding of this study is also consistent with that of Lu (2011) which reported a high budgetary participation of managers in his study of 132 Chinese managers with a mean score of 5.52 on a seven-point scale and Zainuddin and Isa (2011) which reported a fairly high participation level of 3.588 out of 5 points.

In order to provide empirical support for hypothesis one on the budget participation and managerial dysfunctional behaviour relationship, Pearson correlation, independent samples t-tests and simple regression analysis were used. This hypothesis was supported as follows:

Correlation result: $r = .674, p < 0.01$

Regression result: $R^2 = 45.4\%$, $F=252.042, p < 0.05, t(309) = 16.033$

Independent t-tests: $t(309) = -8.568, p < 0.05$

Although the correlation result suggests that there is a high and significant relationship between budget participation and managerial dysfunctional behaviour, such relationship cannot be interpreted to mean absolute causal relationship. Hence, the study went ahead to use simple linear regression which revealed that budget participation has a significant influence on managerial dysfunctional behaviour with about 45% explanatory power. These results can be interpreted as evidence that budgetary participation has a statistically significant influence on the behaviours exhibited by managers. Although the amount of variation explained is low coupled with a fairly above average correlation coefficient, this influence can be interpreted as minimal. The result of independent samples t-tests also suggested that the level of managerial dysfunctional behaviour engaged in by managers depends largely on the level of budgetary participation of managers.

In comparison with prior studies, the findings of this study is consistent with that of Soobaroyen (2007) which noted that budgetary participation induced dysfunctional behaviour. The study noted that the level of dysfunctional behaviour exhibited by managers through budgetary gaming is dependent upon their level of participation in budget setting. The results also supported the proposition of Young (1985) who reported that subordinates who participate in the budgeting process engaged in dysfunctional behaviour by build slack into the budget. These two studies reported a positive relationship between participation and slack. Lu (2011) also reported a positive and significant association between budgetary slack and participation in budget setting for the organisation at $p = 0.01$. This finding corroborates the relationship between MDB and budget participation.

The second hypothesis sought to establish a relationship between budget emphasis and managerial dysfunctional behaviour. The hypothesis gained support as follows:

BE mean score = 3.5645

Correlation result: $r = .676$, $p < 0.05$

Regression result: $R^2 = 45.7\%$, $F=259.716$, $t(309) = 16.116$, $p < 0.05$

Independent t-tests: $t(309) = -5.885$, $p < 0.05$

The findings of this study indicated that superior managers' emphasis on meeting budgetary target is above average and is consistent with the findings of Dunk (1993) which reported a mean score of 5.778 using a seven-point scale. Dunk's study noted that there is a difference in the level of budget slack created depending on the level of budget analysis. Fuad (2004) also found support for a strong relationship between budget emphasis and the extent to which managers created slack. Lau (1999) noted that managers' propensity to create slack was associated with emphasis on setting and meeting tight budget targets. Therefore, the study concluded that the extent of managerial

dysfunctional behaviour is a function of the emphasis that superior managers place on achieving financial targets set out in the budget. The study rejected the null hypothesis of no significant difference.

Through hypothesis three, the study investigated whether the existence of standard operating procedures (SOP) would engender managerial dysfunctional behaviour. The findings of this study indicated the existence of standard operating procedures in Nigerian quoted companies. The study of Sobarooyen (2007) reported a mean score of 3.833 on a five-point scale, indicating that the existence of rules and procedures were above average.

The study also supported a negative relationship between standard operating procedures and managerial dysfunctional behaviour. Furthermore, the study found support that standard operating procedures have no significant influence on manager's extent of information manipulation. Macintosh and Daft (1987) noted that standard operating procedures "are standing body of knowledge that is appropriate for specifying standard behaviours" (p.57) across various levels within the organisation. The findings are also consistent with Soobaroyen (2007) which reported a negative relationship that is non-significant.

Within the sparse literature on the negative consequences of MCS, replication of coherent findings on contemporary issue such as non-financial measures has received lesser attention (Chenhall, 2003). A study by Chow and Van der Stede (2006) compared financial and nonfinancial measures as seen by the manufacturing managers in curtailing short-termism and gamesmanship. The findings of the study suggested that non-financial measures are seen as being more effective at curtailing short-termism (a form of dysfunctional behaviour) and gamesmanship. Hassan et al. (2010) also found support that non-financial measures cause a reduction in earnings management behaviour. These

findings are consistent with the results reported in this study which shows a non-significant relationship (Tables 4.19).

5.3 FINDINGS ON MODERATING EFFECT OF CONTINGENCY AND INSTITUTIONAL VARIABLES ON MCS-MDB RELATIONSHIP

Following the suggestion of Chenhall (2007) that the design and usage of MCS are influenced by the context in which they are applied. Two variables were drawn from contingency propositions. These variables were environmental uncertainty and business unit strategy. This theory has been used in prior MCS studies (Chenhall, 2003) with focus on several outcomes such as managerial attitude and performance (e.g. Ajibolade et al., 2010; Lee & Modell, 2000; Van der Stede, 2000). In order to evaluate the sixth and seventh research questions on whether contingency and institutional variables moderate the relationship between MCS and MDB of quoted companies in Nigeria, propositions 5, 6 & 7 were made.

The fifth proposition examined the moderating effect that perceived environmental uncertainty has on the relationship between management control system and managerial dysfunctional behaviour. The result showed that the model with the moderating variable has an explanatory power of 58%. The moderating effect of PEU accounted for a low but significant increase in R^2 at $p < 0.05$ ($\Delta R^2 = 0.013$, $\Delta F = .9.435$, Sig. $\Delta F = .002$). The sixth proposition also revealed that about 57.3% (Table 4.24) of variations in managerial dysfunctional behaviour can be explained by the model which has business unit strategy as moderating variable. Significant change was observed with the introduction of business unit strategy as a moderating variable ($\Delta R^2 = 0.162$, $\Delta F = 116.573$, Sig. $\Delta F < .001$). The results obtained from hypothesis 7 also show that the model with the interaction term explained about 57.3% of the variation in MDB. The moderating effect of institutional

pressure (IP) accounted for a significant increase in R^2 at $p < 0.05$ ($\Delta R^2 = 0.174$, $\Delta F = 125.415$, Sig. $\Delta F = .000$).

The findings of this study are consistent with the study of Merchant (1990) which argued that environmental uncertainty moderated the relationship between emphasis on financial control and two dysfunctional consequences of control system (data manipulation and myopia). Merchant noted that managers operating in relatively uncertain environments were significantly more likely to react to budget pressure by pulling profits from the subsequent year into the current year than were those operating in relatively certain environments. Furthermore, Hassel (1991) which investigated the effect of environmental dynamism in multinational companies' emphasis on accounting measures also found that there is no indication that tight budget controls would have a negative influence on work conditions of managers facing instability, but foreign managers found it more difficult to accept the evaluative framework if high emphasis is placed on budget controls when their environment is dynamic. However, the small sample size in Hassel's study is a major limitation to these findings. The study of Kren (2003) also provided support that the largest effect on propensity to create slack arose from a direct positive link from environmental uncertainty.

The most important contemporary issue in MCS literature has been that related to the role of strategy (Chenhall, 2003). In the discussion of the study of Govindarajan and Gupta (1985), build strategy was identified as a moderating variable in the relationship between control system and business unit effectiveness (Luft & Shields, 2003). Thus, strategy was modelled as a moderating relationship between MCS and MDB. The findings from the study of Merchant (1990) which investigated the effect of financial control on two types of dysfunctional behaviour (data manipulation and management myopia) using the moderating effects of profit centre strategy, found no support that financial controls was

more appropriate for growth rather than maintain/harvest strategies. However, in the study of Van der Stede (2000), strategy was found to have a moderating effect on budgetary control and two forms of dysfunctional behaviour; budgetary slack creation and managerial short-term orientation. Using structural equation model on survey data obtained from 153 business unit general managers, Van der Stede concluded that business units that either pursue a differentiation strategy or have been more profitable are subject to less rigid budgetary controls, which increase the propensity to build slack.

Following the study of Siivonen (2007) and Baxter & Chua (2006) which suggested that an organisation not only has an operating environment but various institutional environments such as social, legal, professional and regulatory environments, the study made the seventh proposition. The finding of this study is consistent with the study of Perez and Robson (1999) which investigated the budgetary participation process in a subsidiary of a multinational company and described the budget setting process in a company and the institutional processes that led to constant budget revisions and conflicts within the organisation, in a bid to achieve a target acceptable to the head office by engaging in gaming practices. Hussain and Hoque (2002) also found support on the moderating effect of institutional pressure on the relationship between control system and performance.

In summary, support has been established for the various propositions that have been made in this study in one way or another. The findings of the study indicated that the relationship between management control systems and managerial dysfunctional behaviour is moderated by environmental uncertainty, business unit strategy and institutional pressures based on conceptualisation from contingency and institutional paradigms. Consistent with expectation, budgetary participation and budget emphasis

(financial controls) were associated with managerial dysfunctional behaviour while the non-financial controls (standard operating procedures and non-financial measures) had no explanatory power on managerial dysfunctional behaviour.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter deals with the synopsis of entire study with a view to arriving at a conclusion. This section also identifies the limitations to the study and highlights contribution to knowledge, policy recommendations and suggestion for future research.

6.2 SUMMARY

The need to focus more on the control systems of organisations have been raised by various groups of stakeholders such as academics, corporate regulators and shareholders. This need arose from the various corporate scandals, corporate collapses and ultimate loss of investment. The belief is that the troubles in such organisations are as a result of the control systems used by managers (Emmanuel, 2002) or control structures that support personal interest (Otusanya et al., 2011). IFAC (1998) noted that for in order to achieve organisational goals and objectives, management control systems are important tools and that attitudes and behaviour affect performance of organisations (IFAC, 2011). Therefore, this study sought to provide empirical evidence on the influence of managerial dysfunctional behaviour outcome of management control system in the Nigerian quoted companies. Furthermore, the study aimed at providing a better understanding of the MCS-MDB relationship by examining the moderating effect of contingency and institutional factors on the relationship. Various propositions regarding the MCS-MDB relationship were made and data were collected from managers in selected companies quoted on the Nigerian Stock Exchange.

The findings of this study showed that most of the propositions made were supported that management control system could engender managerial dysfunctional behaviour; and that

this relationship can be moderated by contingency and institutional variables. Two of the hypotheses relating to non-financial MCS-MDB relationship were not supported.

Through the first specific objective, the study sought to examine the extent of influence that budget participation has on managerial dysfunctional behaviour. This objective was broken down to two research questions. On one hand, the study evaluated the extent to which managers are involved in the setting of budgets for their organisation. The findings showed that managers are actively involved in the companies' budget setting process as evidenced by a high BP index score of 3.63. This result is consistent with the findings of Chong and Chong (2002) that budget participation is high in Australian companies. On the other hand, the study also made proposition on the BP-MDB relationship. The study found that budget participation has a statistically significant influence on managerial dysfunctional behaviour. Significant differences were found between the managerial dysfunctional outcomes of companies with high budget participation and those with low budget participation. Budget participation was able to explain 45% variation in managerial dysfunctional behaviour.

The study also evaluated the influence of budget emphasis on managerial dysfunctional behaviour through the second objective of the study. The findings provided support that budget emphasis explained 46% variation in managerial dysfunctional behaviour ($R^2 = 45.7\%$, $F=259.716$, $t(309) = 16.116$, $p < 0.05$). Support was found for significant differences between managerial dysfunctional behaviour outcomes of companies with high budget emphasis and those with low budget emphasis ($t(309) = -5.885$, $p < 0.05$).

The study assessed the extent of influence that standard operating procedures have on managerial dysfunctional behaviour through the third objective. Unlike budget participation and budget emphasis which were classified as financial MCS, standard operating procedure was categorised as non-financial MCS. The empirical evidence

provided no support that standard operating procedures constitute significant influence on managerial dysfunctional behaviour. This finding supported the study of Macintosh and Daft (1987) that the existence of formal and documented rules and procedures are suitable for specifying the required standard behaviour.

The fourth objective of the study sought to examine the managerial dysfunctional behaviour outcome of non-financial measurement. The study found that there is no significant relationship between non-financial measurement and managerial dysfunctional behaviour. Consistent with the findings of Hassan et al. (2010), non-financial measurement are capable of curtailing managerial dysfunctional behaviour such as short-termism and gamesmanship.

The moderating effect of contingency and institutional variables was sought in respect of the fifth objective of the study. Three propositions were made on the influence of perceived environmental uncertainty, strategic business unit and institutional pressure on the MCS-MDB relationship. There was empirical evidence that perceived environmental uncertainty has statistically significant moderating influence on the managerial dysfunctional behaviour outcome of management control systems. A minimal change in R^2 of 1.3% was observed. The proposition that strategic business unit would have significant moderating influence on the MCS-MDB relationship was supported. The moderating term brought about 16.2% change in the managerial dysfunctional behaviour outcome of management control systems. The change in F statistics was also significant at $p < 0.05$. The study also found that institutional pressure moderated the relationship between MCS and MDB. A significant R^2 change of 17.4% was found to be statistically significant at $p < 0.05$.

6.3 LIMITATIONS

The view applied in this study is the interaction of agency theory, contingency theory and institutional theory. The selection of these theories offered the opportunity to tie in with existing research streams. However, other theoretical perspectives such as the goal acceptance theory and other variables from the chosen theories could possibly broaden the perspective and provide additional interesting contributions.

This study had only four variables used in measuring management control systems. In reality, they are certainly not the only measures of management control systems. Other variables such as balanced scorecard and activity based costing may be considered in future studies. Hence, the extent of generalisation which can be made about the managerial dysfunctional behaviour outcome of management control systems should be handled with caution.

The findings of this study and the conclusion drawn from them should not be viewed in isolation but in combination with the drawbacks peculiar to research studies in developing economies such as respondents' unwillingness to respond. However, the research design made effort to control for such issue.

6.4 CONTRIBUTIONS TO KNOWLEDGE

- i. This study has opened up an unexplored area of management accounting research in Nigeria by providing evidence on managerial dysfunctional behaviour outcome of management control systems in contrast to the prior studies on the positive outcomes such as performance and motivation.
- ii. By examining the effect of two types of control systems variables on dysfunctional behaviour, this study has provided a more robust view of the

MCS-MDB relationship than in extant literature which has often considered one MCS component in analyzing the relationship.

- iii. The current study developed a framework of the impact of MCS on managerial dysfunctional behaviour which incorporated new variables (Institutional and Contingency) that were hitherto not studied together.
- iv. This study has demonstrated the moderating effects of contingency theory and institutional theory variables on the managerial dysfunctional behaviour outcome of MCS, a novel finding from literature in developing countries. Before the current study, only Ajibolade (2008) has integrated the influence of contingency and institutional variables on MCS variables in Nigeria; albeit, the focus was on positive outcome of management control systems.

6.5 CONCLUSION

This study on managerial dysfunctional behaviour outcome of management control systems has refocused attention on behavioural issues in the management of quoted companies in Nigeria. The findings of this study are generally consistent with extant literature outside Nigeria. From the results of the study, it can be concluded that information manipulation and gaming are behavioural outcomes of management control systems.

The findings of the study revealed that management control systems which are financial in nature are capable of inducing managerial dysfunctional behaviour. Specifically, findings of the study have provided support for the proposition that significant differences exist in the level of managerial dysfunctional behaviour of companies with high (or low) budget participation and high (or low) budget emphasis. The study further revealed that non-financial management control systems (standard operating procedures and non-

financial measurement) have no significant influence on managerial dysfunctional behaviour. This evidence suggests the possible combinations or choice of management control system variables which can assist in curtailing managerial dysfunctional behaviour in quoted companies in Nigeria.

This study also demonstrated the significance of the moderating effect of contingency and institutional perspectives on the managerial dysfunctional behaviour outcome of management control systems Nigerian quoted companies. Contrary to expectation, perceived environmental uncertainty revealed minimal significant moderating effect, strategic business unit and institutional pressure are better moderating variables on the MCS-MDB relationship. Thus, suggesting that further research may be needed in using other constructs of environmental uncertainty.

This study, which has integrated contingency and institutional perspectives in examining management control systems, is a pioneer behavioural study in management accounting in Nigeria. On a general note, the findings of the study are in conformity with predicted directions and comparable with other research studies elsewhere. There is also established statistically, the reliability and validity of the measures used in this study which can be used by future interested researchers as reference.

Any generalisation of the results of this study should be done with caution within the confines of the limitations expressed earlier in the study. Therefore, it is considered necessary to make some recommendations and present several opportunities both to advance and extend the findings of this study in future research work.

6.6 RECOMMENDATIONS

From the findings of the study, there is evidence to suggest managerial dysfunctional behaviour outcome of management control systems in Nigeria. It has demonstrated that management control systems have varying degree of influence on managerial dysfunctional behaviour, with non-financial MCS having the least influence. The implication of this finding for the management of these companies is that there is the need to make important choice on possible combinations of management control systems to be used. Empirical evidence from the study also suggests the need for management to give adequate consideration to the level of budgetary participation and budgetary emphasis that is allowed within the organisation, as higher budget participation and higher budget emphasis tend to increase the level of managerial dysfunctional behaviour.

The role of well documented punishment for managers which engage in gaming and information manipulation is imperative as its existence suggest lower dysfunctional behaviour. There is a need to consider the business strategy of the organisation in the choice of management control system mechanism for use. The study also provided evidence to suggest that institutional pressure from the organisations' environment is essential in evaluating the behaviours exhibited by managers. However, the role of perceived environmental uncertainty in managerial dysfunctional behaviour outcome of management control systems is of lesser significance compared to other variables.

6.7 FUTURE RESEARCH DIRECTIONS

This research represents a first step towards integrating contingency and institutional perspective into a behavioural research in managerial accounting. The scope of this study is however limited, further research will be needed to develop a complete understanding of the managerial dysfunctional behaviour outcome of management control systems. The

following discussion proposes some possibilities for both advancing and extending this research.

First, management control systems have been conceptualized in terms of budget participation, budget emphasis, standard operating procedures and non-financial measurement; other studies may explore other management control systems variables such as balanced score card, activity based costing and product costing. In the same vein, other studies may conceptualize dysfunctional behaviour in terms of short-termism, budgetary slack and managerial myopia.

Second, the conceptualization of perceived environmental uncertainty in this study followed that of Sund (2008) which identified three major types of uncertainties. However, the findings provided minimal support for the proposition made. Other studies may follow the conceptualization of uncertainty using the study of Ajibolade (2008) and their effect on the MCS-MDB relationship.

Third, based on empirical results from this study, there appears to be some unexplained variations in managerial dysfunctional behaviour. Other organizational variables relating to corporate governance may be responsible for this. Therefore, it may be interesting to integrate the MCS variables with corporate governance variables.

Furthermore, this study sampled companies quoted on the Nigerian Stock Exchange. Accounting researchers are therefore invited to replicate this study using samples from companies that are not quoted on the Nigerian Stock Exchange. Finally, a comparative study of companies in Nigeria, a developing country with another developing country may be an interesting area to pursue.

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APPENDIX 1A

QUESTIONNAIRE COVER LETTER

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

Dear Sir/Madam,

REQUEST FOR COMPLETION OF QUESTIONNAIRE

My name is Fagbemi, Temitope Olamide. I am a doctoral student in the University of Lagos. I am conducting a research titled: “Management Control Systems and Managerial Dysfunctional Behaviour in Nigerian Quoted Companies”. This study requires me to find out certain things about the management control system practices of your organisation and the findings from the study are aimed at improving performance of quoted companies. This research is part of the requirements for the award of a Ph.D. degree in Accounting.

I hereby request for your co-operation in the completion of the attached questionnaire. The questionnaire is expected to be completed by senior managerial staff in the finance, accounting or operation function of quoted companies, who have considerable knowledge of the management control system practices of the organisation.

I hereby solicit for your response by completely providing answers to the entire issues raised in the questionnaire as those copies of questionnaire that are not fully completed could pose serious problems during data analysis. Be assured that all individual responses will be treated with utmost confidentiality and will be used only for academic purpose.

Thank you for sparing some of your precious time.

Yours faithfully,
Fagbemi, Temitope Olamide B.Sc., M.Sc., ACA
Department of Accounting,
School of Postgraduate Studies,
University of Lagos, Nigeria.

APPENDIX 1B QUESTIONNAIRE

Instructions: Please tick (✓) the option that correctly depicts your choice.

SECTION ONE – Demographic and Institutional Data

(1a) Your position in the organisation

(a) Top level management ☐

(b) Middle level management ☐

(c) Operational level management ☐

(1b) Department

(a) Accounts/Finance ☐ (b) Others (e.g. operations) ☐

(2) Working Experience

(a) Less than 6years ☐

(b) 6years to 10years ☐

(c) 11years to 15years ☐

(d) 15years and above ☐

(3) Qualification

(a) B.Sc./HND ☐

(b) M.Sc./M.B.A/Ph.D. ☐

(c) Professional Accounting Qualification (ACCA, ACA, etc) ☐

(d) Other Professional Qualification (specify).....

SECTION TWO - Budget Participation

Instructions: Please tick (✓) the option that correctly depicts your choice.

(5) What is the extent of your agreement with the following activities in securing a budget for your organisation or department?

S/No	Items	Strongly Disagree					Strongly Agree	
a.	My participation in securing an appropriate budget for my department is very important.	1	2	3	4	5		
b.	My opinion has a great influence in the final budget figures for my department.	1	2	3	4	5		
c.	I can freely state my opinion concerning the departmental budget to my supervisor.	1	2	3	4	5		
d.	I am actively involved in the budget setting process of my department.	1	2	3	4	5		
e.	My supervisor regularly seeks my opinion when there is the need for budget setting or revision of budgets for my department.	1	2	3	4	5		
f.	The final budget figures secured for my department is derived from my level of involvement.	1	2	3	4	5		

SECTION THREE - Budget Emphasis

Instructions: Please tick (✓) the option that correctly depicts your choice.

- (6) What is the extent of your agreement on the importance that your supervisor attaches to each of the following statements in evaluating your performance?

S/No	Items	Strongly Disagree					Strongly Agree	
a.	Adverse deviations from the budget always give my supervisor a lot of concern.	1	2	3	4	5		
b.	My interaction with other staff members is more cordial when I attain my financial targets.	1	2	3	4	5		
c.	My contribution to company profits is always emphasised by my supervisor	1	2	3	4	5		
d.	My inability in meeting the budget always attract some form of penalty	1	2	3	4	5		
e.	Achievement of my financial target is more recognised than other efforts that I put into my work.	1	2	3	4	5		
f.	My explanations of deviations from budget and suggestions for corrective action are of value to my supervisor.	1	2	3	4	5		
g.	My supervisor attaches much importance to meeting budgeted financial targets in the short-run.	1	2	3	4	5		

SECTION FOUR - Standard Operating Procedures

Instructions: Please tick (✓) the option that correctly depicts your choice.

- (7) To what extent does your organisation have standardised and documented procedures for the following classes of activities?

S/No	Items	Very Low Extent				Very High Extent	
a.	Recruitment, promotion and employee disengagement.	1	2	3	4	5	
b.	Purchase of capital equipment.	1	2	3	4	5	
c.	Procurement of operating inputs or materials	1	2	3	4	5	
d.	Operating procedures, time plans and schedules.	1	2	3	4	5	
e.	Making tradeoffs within the line items of your department's current period budget.	1	2	3	4	5	

SECTION FIVE - Non-financial Measurement

Instructions: Please tick (✓) the option that correctly depicts your choice.

- (8) What is the extent of attention that your supervisor attaches to each of the following criteria in evaluating your performance?

S/No.	Items	Low Attention					Very High Attention	
		1	2	3	4	5		
a.	Customer service	1	2	3	4	5		
b.	Deviations from quality of work or output	1	2	3	4	5		
c.	Attitude to work	1	2	3	4	5		
d.	Employee relations	1	2	3	4	5		
e.	Team playing	1	2	3	4	5		
f.	Extent of market share or market penetration	1	2	3	4	5		
g.	Product innovation	1	2	3	4	5		

SECTION SIX – Business Unit Strategy

Instructions: Please tick (✓) the option that correctly depicts your choice

- (9) To what extent is your organisation positioned in comparison with competitors in the following areas:

S/No	Items	Significantly Lower			Significantly Higher		
		1	2	3	4	5	
a.	Product prices	1	2	3	4	5	
b.	Research and development expenditures	1	2	3	4	5	
c.	Product quality	1	2	3	4	5	
d.	Brand image	1	2	3	4	5	
e.	Product features	1	2	3	4	5	

SECTION SEVEN - Perceived Environmental Uncertainty

Instructions: Please tick (✓) the option that correctly depicts your choice on how often you are faced with uncertainties relating to your environment in respect of price competition, technology obsolescence, political constraints, availability of funds, etc

S/No	Items	Never					Always	
10a.	How often do you have information you need in order to understand changes in the future of the organisation?	1	2	3	4	5		
b.	How often do you believe that the management information you have about your environment is adequate for management decision making?	1	2	3	4	5		
c.	How often do you feel that you are able to get the necessary information about your environment for management decision making?	1	2	3	4	5		
d.	How often are you able to predict which external organisational factors will be important considerations for future management decision making?	1	2	3	4	5		
e.	How often are you able to predict the impact of happenings in your environment?	1	2	3	4	5		
f.	How often do you feel that you fully understand the effect of price competition on your management decision making?	1	2	3	4	5		
g.	How often are you able to receive feedback concerning the effect that environmental factors will have on your decision making process?	1	2	3	4	5		
h.	How often do you feel you can consider and then evaluate alternative courses of action before making a decision to follow a specific course of management action?	1	2	3	4	5		
i.	How often do you feel that you can accurately anticipate the consequences/outcome of management decisions before they are made?	1	2	3	4	5		
j.	How often do you feel that you know how to respond to changes in the external management environment?	1	2	3	4	5		
k.	How often do you feel that you are able to determine what the management response options should be in the light of changes in the external management environment?	1	2	3	4	5		

SECTION EIGHT - Managerial Response to Management Control Systems

Instructions: Please tick (✓) the option that correctly depicts your choice.

- (11) What is your opinion about the following management control system issues in your department or organisation?

	Items	Strongly Disagree					Strongly Agree	
a.	Managers often place high importance on the success of getting a generous budget for the department.	1	2	3	4	5		
b.	Managers have a tendency to avoid being the bearer of bad news when presenting information to upper level management.	1	2	3	4	5		
c.	Managers often choose to present information that makes their own performance look better.	1	2	3	4	5		
d.	Managers have a tendency to emphasise data that reflects favourably upon them when presenting information to upper level management.	1	2	3	4	5		
e.	Certain job-related activities can be safely ignored when they are not monitored by a supervisor.	1	2	3	4	5		
f.	Managers can slightly adjust tasks to reflect performance with organisational goals.	1	2	3	4	5		
g.	Control systems do not cause managers to be particularly concerned with improving efficiency in their area of responsibility.	1	2	3	4	5		

SECTION NINE – Institutional Pressure

Instructions: Please tick (✓) the option that correctly depicts your choice

- (13) To what extent is the operating situation of your organisation or department directly affected by actions associated with the following institutions/organisation over the past few years?

S/No	Items	Very Low Extent				Very High Extent	
a.	Parent or Holding Company	1	2	3	4	5	
b.	The Nigerian Stock Exchange	1	2	3	4	5	
c.	Financial Institutions e.g. CBN, Banks, NDIC, etc	1	2	3	4	5	
d.	Groups representing staff e.g. Trade unions	1	2	3	4	5	
e.	Professional associations e.g. ICAN, CIBN, CITN, CIMA, etc	1	2	3	4	5	
f.	Groups representing standardisation of products e.g. MAN, SON, NAFDAC, NCC, etc	1	2	3	4	5	
g.	Publicity from media houses	1	2	3	4	5	

Thank you for participating in this study. If you would like to be notified of the outcome of this study, please provide your contact information in the next box.

Respondent's Details *(Optional)*

Name:
Designation:
Company:
Address:
E-mail:
Telenehone:

APPENDIX 2

THE STUDY'S SAMPLING FRAME OF QUOTED COMPANIES IN NIGERIA

S/No.	Names
1.	FTN COCOA PROCESSORS PLC
2.	LIVESTOCK FEEDS PLC
3.	AIRLINE SERVICES & LOGISTICS PLC
4.	NIGERIAN AVIATION HANDLING CO. PLC
5.	DUNLOP NIGERIA PLC
6.	R. T. BRISCOE (NIG.) PLC
7.	ACCESS BANK PLC
8.	DIAMOND BANK PLC
9.	ECOBANK NIGERIA PLC
10.	FIDELITY BANK PLC
11.	FIRST BANK OF NIGERIA PLC
12.	FIRST CITY MONUMENT BANK PLC
13.	GUARANTY TRUST BANK PLC
14.	SKYE BANK PLC
15.	STANBIC IBTC BANK PLC
16.	STERLING BANK PLC
17.	UNITED BANK FOR AFRICA PLC
18.	WEMA BANK PLC
19.	ZENITH BANK PLC
20.	GUINNESS NIGERIA PLC
21.	NIGERIAN BREWERIES PLC
22.	DANGOTE CEMENT PLC
23.	LAFARGE WAPCO PLC
24.	NIGERIAN ROPES PLC
25.	NIGERIAN WIRE INDUSTRIES PLC
26.	AFRICAN PAINTS (NIG.) PLC
27.	BEGER PAINTS NIG. PLC
28.	CHEMICAL AND ALLIED PRODUCT PLC
29.	DN MEYER PLC
30.	IPWA PLC
31.	NIGERIA-GERMAN CHEMICALS PLC
32.	PAINT & COATINGS MAN. PLC
33.	PORTLAND PAINT AND PRODUCTS NIG. PLC
34.	COURTEVILLE INVESTMENTS PLC
35.	RED STAR EXPRESS PLC
36.	SECURE ELECTRONIC TECHNOLOGY PLC
37.	TRANS-NATIONWIDE EXPRESS PLC

38. HALLMARK PAPER PRODUCTS PLC
39. NCR (NIGERIA) PLC
40. OMATEK VENTURES PLC
41. THOMAS WYATT NIGERIA PLC
42. TRIPPLE GEE & COMPANY PLC
43. A. G. LEVENTIS (NIG.) PLC
44. CHELLARAMS PLC
45. JOHN HOLT PLC
46. P Z CUSSONS NIGERIA PLC
47. SCOA NIGERIA PLC
48. TRANSNATIONAL CORP. OF NIGERIA PLC
49. UAC OF NIGERIA PLC
50. UNILEVER NIGERIA PLC
51. ARBICO PLC
52. CAPP & D'ALBERTO PLC
53. COSTAIN (W.A.) PLC
54. MULTIVERSE PLC
55. CAPITAL OIL PLC
56. JULI PLC
57. MCNICHOLS CONSOLIDATED PLC
58. ROKANA INDUSTRIES PLC
59. SMART PRODUCTS NIGERIA PLC
60. UNION VENTURES & PET. PLC
61. W. A. ALUM. PRODUCTS PLC
62. INTERLINKED TECHNOLOGIES PLC
63. NIGERIAN WIRE & CABLE PLC
64. 7-UP BOTTLING COMPANY PLC
65. BIG TREAT PLC
66. CADBURY NIGERIA PLC
67. DANGOTE FLOUR MILLS PLC
68. DANGOTE SUGAR REFINERY PLC
69. FLOUR MILLS NIGERIA PLC
70. MULTI-TREX INTEGRATED FOODS PLC
71. NESTLE NIGERIA PLC
72. NIGERIA BOTTLING COMPANY PLC
73. TANTALIZERS PLC
74. UNION DICON SALT PLC
75. UTC NIGERIA PLC
76. LENNARDS (NIG.) PLC
77. EKOCORP PLC
78. EVANS MEDICAL PLC
79. FIDSON HEALTHCARE PLC
80. GLAXO SMITHKLINE CONSUMER NIGERIA PLC
81. MAY & BAKER NIGERIA PLC

82. MORISON INDUSTRIES PLC
83. NEIMETH INTERNATIONAL PHARM. PLC
84. UNION DIAGNOSTIC & CLINICAL SERVICES PLC
85. IKEJA HOTEL PLC
86. THE TOURIST COMPANY OF NIGERIA PLC
87. ALUMACO PLC
88. B.O.C. GASES PLC
89. FIRST ALUMINUM NIGERIA PLC
90. NIGERIAN ENAMELWARE CO. PLC
91. VITAFOAM NIGERIA PLC
92. VONO PRODUCTS PLC
93. CHAMS PLC
94. ETRANZACT INTERNATIONAL PLC
95. IHS PLC
96. MASS TELECOM INNOVATION NIG. PLC
97. MTECH COMMUNICATIONS PLC
98. STARCOMMS PLC
99. AFRICAN ALLIANCE INSURANCE PLC
100. AIICO INSURANCE PLC
101. CONSOLIDATED HALLMARK INSURANCE PLC
102. CONTINENTAL REINSURANCE PLC
103. CORNERSTONE INSURANCE PLC
104. CUSTODIAN & ALLIED INSURANCE PLC
105. EQUITY ASSURANCE PLC
106. GOLDLINK INSURANCE PLC
107. GREAT NIGERIAN INSURANCE PLC
108. GUARANTY TRUST ASSURANCE PLC
109. GUINEA INSURANCE PLC
110. INTERNATIONAL ENERGY INSURANCE PLC
111. INVESTMENT & ALLIED ASSURANCE PLC
112. LASACO ASSURANCE PLC
113. LAW UNION AND ROCK INS. PLC
114. LINKAGE ASSURANCE PLC
115. MUTUAL BENEFITS ASSURANCE PLC
116. NEM INSURANCE COMPANY PLC
117. NIGER INSURANCE CO. PLC
118. OASIS INSURANCE PLC
119. PRESTIGE ASSURANCE CO. PLC
120. REGENCY ALLIANCE INSURANCE CO. PLC
121. SOVEREIGN TRUST INSURANCE PLC
122. STACO INSURANCE PLC
123. STANDARD ALLIANCE INSURANCE PLC
124. UNIC INSURANCE PLC
125. UNIVERSAL INSURANCE COMPANY PLC

126. C & I LEASING PLC
127. STOKVIS NIGERIA PLC
128. AFROMEDIA NIG. PLC
129. ABBEY BUILDING SOCIETY PLC
130. RESORT SAVINGS AND LOAN PLC
131. UNION HOMES SAVINGS AND LOANS PLC
132. CRUSADER (NIGERIA) PLC
133. DEAP CAPITAL MANAGEMENT & TRUST PLC
134. NIGERIA ENERGY SECTOR FUND
135. NPF MICROFINANCE BANK PLC
136. ROYAL EXCHANGE PLC
137. ABPLAST PRODUCTS PLC
138. AVON CROWNCAPS & CONTAINERS NIG. PLC
139. BETA GLASS COMPANY PLC
140. GRIEF NIGERIA PLC
141. NAMPAK NIGERIA PLC
142. NIGERIAN BAGS MAN. CO. PLC
143. POLY PRODUCTS (NIG.) PLC
144. STUDIO PRESS (NIG.) PLC
145. AFRICAN PETROLEUM PLC
146. AFROIL PLC
147. BECO PETROLEUM PRODUCT PLC
148. CONOIL PLC
149. ETERNA OIL & GAS PLC
150. MOBIL OIL NIGERIA PLC
151. MRS OIL NIGERIA PLC
152. OANDO PLC
153. TOTAL NIGERIA PLC
154. ACADEMY PRESS PLC
155. LONGMAN NIGERIA PLC
156. UACN PROPERTY DEVELOPMENT CO. PLC

Source: *Nigerian Stock Exchange, Factbook (2011)*

APPENDIX 3

NORMAL PLOTS OF THE VARIABLES

Figure 4.1: Normal P-P Plot of BP

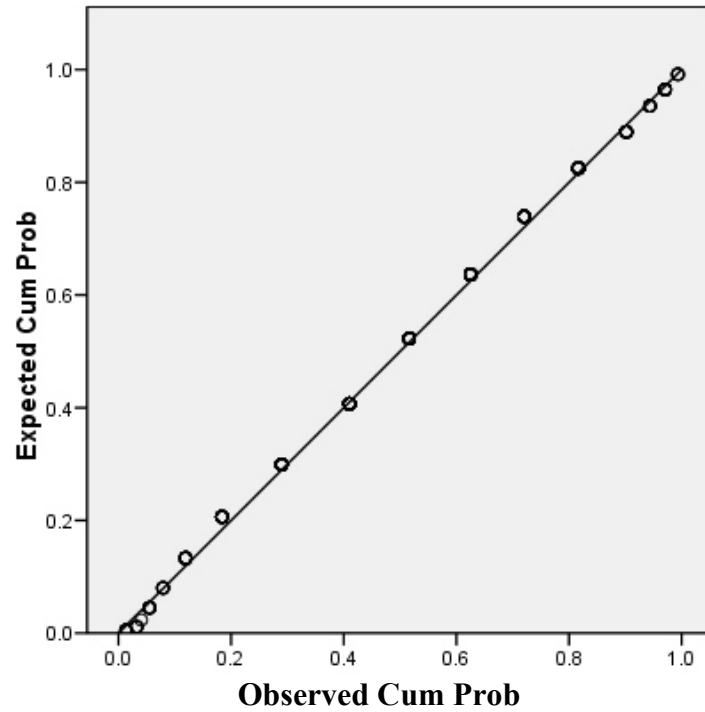


Figure 4.2: Normal P-P Plot of BE

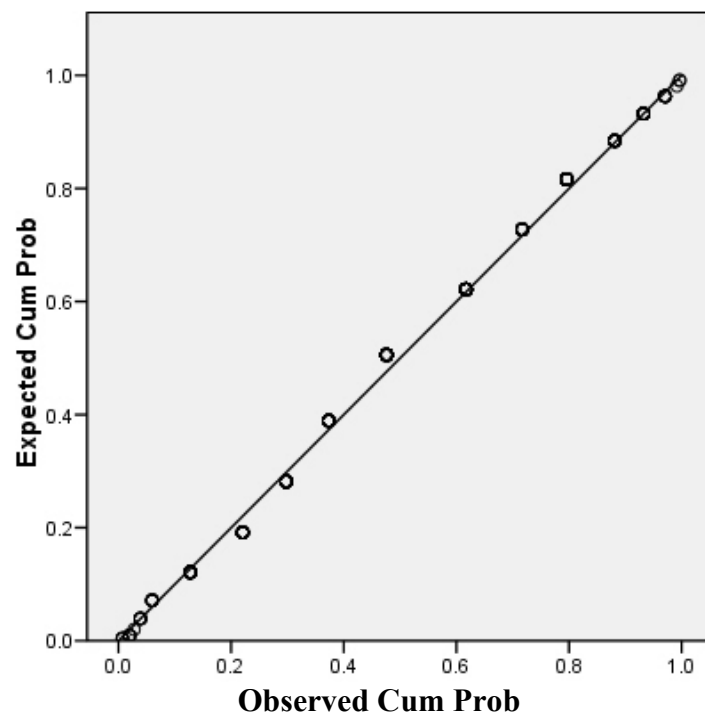


Figure 4.3: Normal P-P Plot of SOP

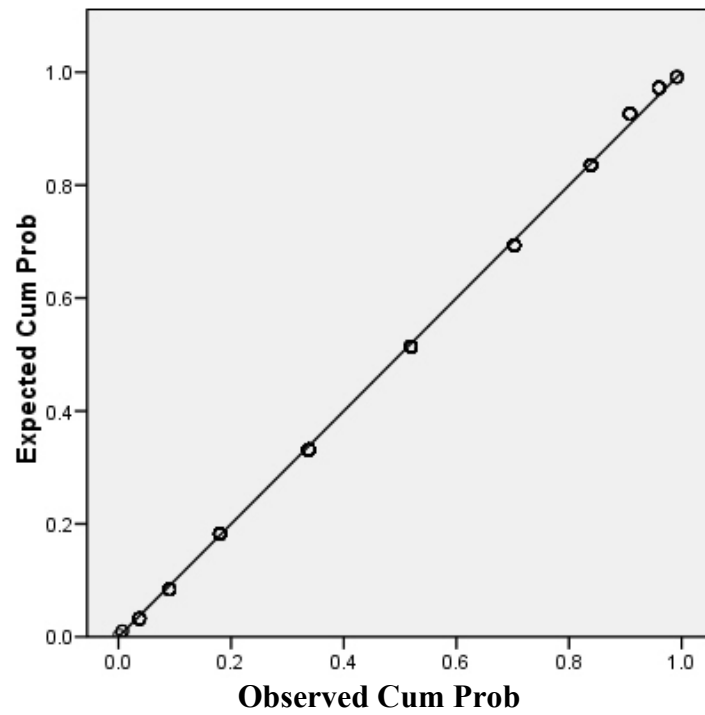


Figure 4.4: Normal P-P Plot of NFM

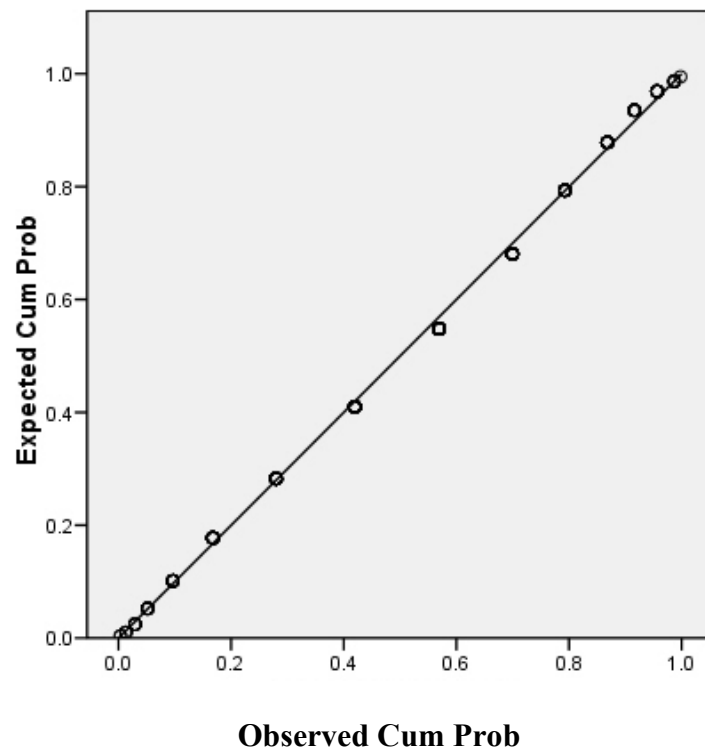


Figure 4.5: Normal P-P Plot of PEU

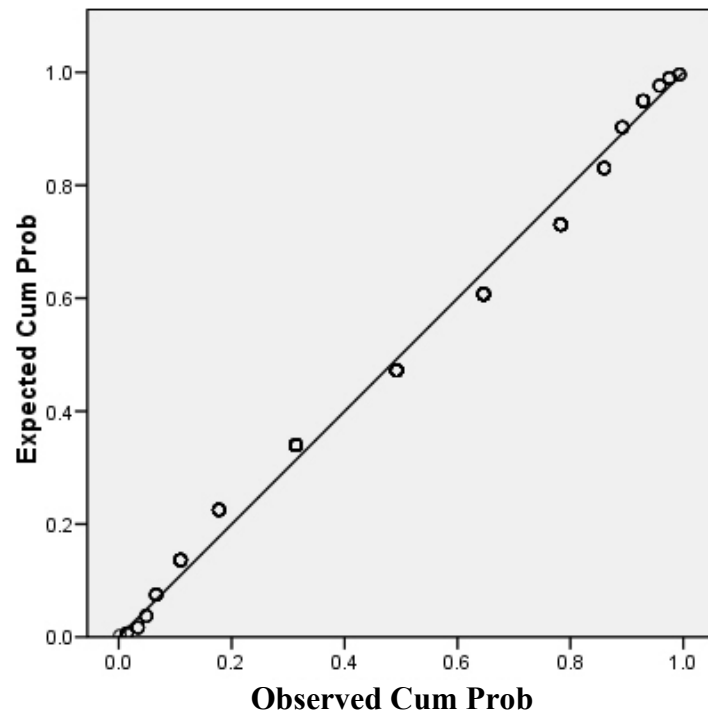


Figure 4.6: Normal P-P Plot of BUS

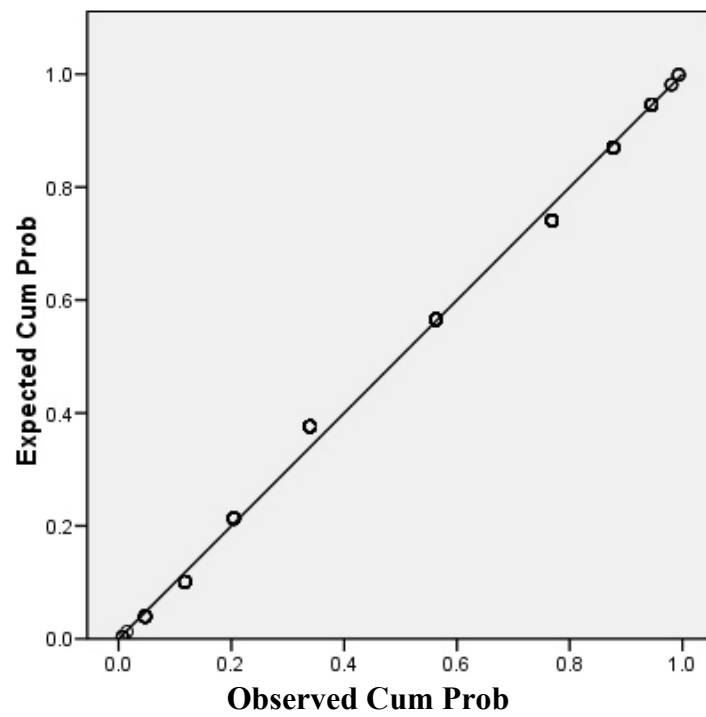
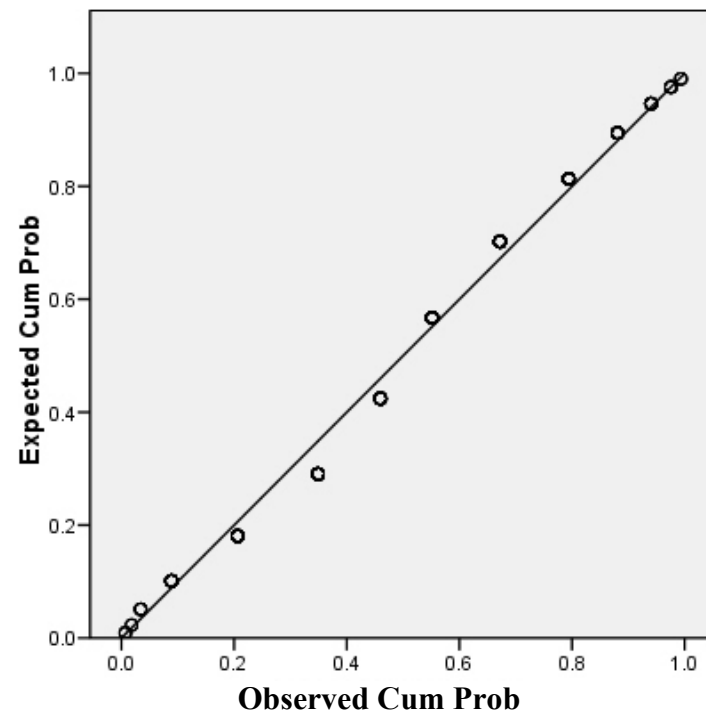


Figure 4.7: Normal P-P Plot of IP



APPENDIX 4A

TABULAR PRESENTATION OF PRIOR MCS STUDIES ON BUDGET PARTICIPATION (BP)

S/No.	Author(s)	Variable(s) Examined	Respondents/ Sample	Methods	Results
1.	Govindarajan (1986)	Performance Attitude (moderated by environmental uncertainty)	77respondents 1 company	Questionnaire Survey method	Environmental uncertainty had a positive interaction effect on the participation/performance (and attitude) relationship
2.	Kren (1992a)	Performance (moderated by locus of control)	44respondents Not applicable	Path analysis Laboratory experiment	External locus of control diminished the performance effects of participation
3.	Kren (1992b)	Performance and Job-relevant information (JRI)	80respondents 63companies	Survey Zero-order correlation Path analysis	Weak performance/participation relationship found. Budgetary participation was related to acquisition of JRI
4.	Chenhall (1986)	Performance	39respondents 9 companies	Survey Regression	Participation was positively related to performance. Relationship was moderated by superior/subordinate authoritarianism
5.	Frucot & Shearon (1991)	Locus of control (LOC) Performance Satisfaction	83 Mexican managers 21companies	Survey Regression	Supported that participation has a relationship with LOC and performance. Participation/LOC relationship was not supported
6.	Kren (1990)	Motivation	Students	Experimental study	Weak positive relationship
7.	Mia (1988)	Managerial Performance Attitude	83respondents 1company	Survey	Participation in the budgeting process by managers who reported a more favourable attitude or motivation was

					associated with improved performance.
8.	Merchant (1981)	Managerial attitude Performance/Motivation	170respondents 19companies	Survey Rank order correlation	Positive relationship supported. A link from participation to motivation and to performance established,
9.	Mia (1989)	Managerial Performance	6 companies Middle-level managers	Survey	Managerial performance was high where perceived participation was commensurate with perceived level of job difficulty.
10.	Dunk (1992)	Job Satisfaction	26 manufacturing managers	Regression Survey	Relationship supported as higher level managers derive greater job satisfaction from participation than lower-level managers.
11.	Shields and Young (1993)	Performance (mediating variable: budget based- incentives)	98 Corporate controllers from S&P 500 firms	Path analysis survey	Positive association between participation and budget-based Incentives while the extent of budgetary participation was found not to have any indirect or direct impact on performance.
12.	Cherrington & Cherrington (1973)	Performance Satisfaction	Undergraduate students (230)	Laboratory experiment	Participation leads to performance and satisfaction in output-budget environment.
13.	Chenhall and Brownell, 1988	Role ambiguity Performance	1 company 33 respondents	Survey	Participation reduced role ambiguity and thus had positive effects on satisfaction and performance.
14.	Tsui (2001)	Managerial performance	89sub-unit managers 7 companies	Survey	Relationship between participation and performance depends on cultural background of managers.
15.	Milani (1975)	Performance Attitude	1 company 82 respondents	Survey	Weak relationship between budget-setting participation and performance. Participation and attitudes towards the job and the company are significantly

					positively correlated.
16.	Chong & Chong (2002)	Goal commitment Performance	79 middle-level managers	Survey Structural equation modelling	Support was found for the effect of budget goal commitment and information roles of budget participation on job performance.
17.	Nouri and Parker (1998)	Job performance	135 managers 1 company	Survey Path analysis	Budget participation has direct relationship with job performance but indirect relationship through budget adequacy and organisational commitment.
18.	Bruns & Waterhouse (1975)	Structure Size	26 companies 284 managers	Survey	Support was found for structure/participation relationship while size and technology have positive relationship with structure and structuring implies distribution of authority and increase in participation.
19.	Searfoss (1976)	Motivation	342 respondents 5 companies	Survey	Positive relationship was established.
20.	Wentzel (2002)	Fairness Performance	74 responsibility area managers Urban hospital	Survey	High participation level encourage higher sense of fairness which in turn, increases managers' commitment to budgetary goals and consequently enhances performance.
21.	Young (1985)	Slack	MBA students (43)	Laboratory experiment	Participation in the budget setting process gives room for slack creation.
22.	Brownell (1981, 1982a)	Locus of control (LOC) Performance	46 undergraduate students and 48 middle level managers	Laboratory experiment Survey	Performance is significantly affected by the interaction of LOC and participation. Participation has a negative effect on performance with managers who feel that their destinies are controlled luck while the support is positive for those who have control over their destinies.

23.	Brownell and McInnes (1986)	Performance Motivation	140 respondents 3 companies	Survey Path analysis	Failed to find a significant link between motivation and performance, although they did find that participation was positively related to performance.
24.	Brownell (1982b)	Evaluative style Performance	1 company 48 managers	Survey Regression	Supervisory evaluative style was found to be moderated by participation with a resultant effect on performance.
25.	Onsi (1973)	Budgetary slack	7 companies 132 functional managers	Factor analysis Correlation	positive correlation between an “authoritarian top management budgetary control system” and slack attitude whereas participation was negatively related to “less need to create slack”
26.	Shields & Shields (1998)	Planning Motivation Co-ordination	MBA students 60 managers	Survey	Planning, motivation and co-ordination can be achieved when there is budget participation under environmental uncertainty, task uncertainty and task interdependence respectively.
27.	Maiga & Jacobs (2007)	Fairness Trust	163 managers in 13 organisational types	Survey Structural equation modelling	Budget participation impacts both procedural fairness and distributive fairness which, in turn, affect trust.
28.	Kyj & Parker (2008)	Leadership style Evaluative use of budget	70 managers 13 companies	Survey Path analysis	The argument that superiors encourage subordinate participation when the superior’s leadership style is considerate was supported. Findings suggested that superiors encourage participation when budget goals are used in the performance evaluation of subordinates.

APPENDIX 4B

TABULAR PRESENTATION OF PRIOR MCS STUDIES ON BUDGET EMPHASIS (BE)

S/No.	Author(s)	Outcome Variable	Sample Respondents	Method of analysis	Results
1.	Hopwood (1972)	Job-related tension (JRT)	1 company 167 Cost-centre managers	Questionnaire survey Pairwise t-test	Significant relationship established
	Hirst & Yetton (1981)	Role ambiguity	111 managers who are part-time students	Survey	higher level of job-related tension and more social withdrawal when budget emphasis and task uncertainty are at their extremes (low and high).
2.	Otley (1978)	JRT Budgetary performance (BP)	1 company 39 profit-centre managers	Correlation	No significant relationship between BE and JRT Positive relationship between BE and BP
3.	Onsi (1973)	Budgetary slack Data manipulation	7 companies 132 functional managers	Factor analysis Correlation	Relationship supported Relationship supported
4.	Govindarajan (1988)	SBU Effectiveness	121 SBU managers 24 companies	Hierarchical regression	The proposition that budget emphasis is more appropriate for low cost strategy than differentiation strategy was supported.
5.	Hirst (1983)	JRT Social withdrawal	111 managers	Regression	Linear relationship between emphasis on budget and the JRT dependent variable.

6.	Govindaranjan (1984)		58 business units managers 8 Fortune 500 firms	Survey Correlation	Results showed a negative correlation between environmental uncertainty and RAPM, with higher negative correlations for more effective business units.
7.	Harrison (1993)	Job Satisfaction Tension	211 managers 28 companies	Regression	High emphasis on budget or accounting performance measures in superiors' evaluative style has a relationship with higher job satisfaction in lower power distance and low individualism society.
8.	Merchant (1981)	Performance	19companies 170 managers	Survey z-test	The study could not detect any significant link between budget emphasis and departmental performance.
9.	Lau, Low & Eggleton (1995)	Managerial Performance	112 managers 80 companies	Hierarchical regression	There is support for a high budget emphasis and high budgetary participation combination in low task difficulty situations; and a high budgetary participation style, regardless of budget emphasis, in high task difficulty situation.
10.	Merchant (1990)	Data manipulation Myopia	54 profit centre managers 1company	Survey Correlation	Manipulation of performance measures and managerial myopia are positively correlated with emphasis to meet financial targets.
11.	Bruns and Waterhouse (1975)	Structure	284respondents 27companies	Survey	Greater emphasis on budget goals, participation, standardized budgeting/planning and communication systems was found in large, decentralized firms. Reduced reliance on formal budgeting systems

					and more on direct observation of subordinate behaviour and interpersonal communication in smaller, more centralized firms.
12.	Govindarajan & Gupta (1985)	Effectiveness	58 SBU managers 8 Fortune 500 firms	2-way interaction	Greater emphasis on short-term criteria and higher reliance on non-formula-based measures in determining SBU managers' reward contributes to effectiveness in the case of build strategy while it hinders it under harvest strategy.
13.	Brownell & Hirst (1986)	Job related tension (JRT)	76 managers 1 company	Hierarchical regression	Budget participation and budget emphasis (high/low) has a relationship with JRT. This relationship is moderated by level of task uncertainty.
14.	Brownell (1985)	Performance	61 managers 1 company	Difference of means test Regression	There is a no significant support for any interaction between emphasis on accounting information and functional areas affecting performance. Findings also suggest that low reliance on accounting information is appropriate within a more complex environment.
15.	Hartmann 2005	Environment Tolerance for ambiguity (TFA)	196 managers 11 companies	Path analytic modelling technique of partial least squares (PLS)	Environmental uncertainty has a positive effect on the opinion of managers about appropriateness of emphasising accounting measures such as budget while task uncertainty has a negative effect. Uncertainty has a significant effect on the perceived appropriateness of accounting performance measures for

					managers with low tolerance for ambiguity than for those with high tolerance.
16.	Hartmann (2008)	Leadership style Budget participation Information asymmetry	70 managers and supervisors 13 companies	Survey Path analysis	Evaluative use of budget was found to have a significant direct and indirect effect on budget participation. The indirect effect is as a result of encouragement for budget participation.

APPENDIX 4C

TABULAR PRESENTATION OF PRIOR MCS STUDIES ON BUDGETARY SLACK AND OTHER DYSFUNCTIONAL BEHAVIOURS

S/No.	Author(s)	Variable(s) Examined	Sample/ Respondents	Results
1.	Onsi (1973)	Attitude	107 managers 7 companies	There is support for a relationship between managers' attitude toward a budgetary control system that is authoritarian and budgetary slack. There is also support that budgetary slack is created as a result of budgetary pressure and emphasis on attaining the budget.
	Young (1985)	Participation Social pressure Risk aversion	43 MBA students in a laboratory setting	Participation with private information does not lead to more budgetary slack than when information is shared. Budgetary slack is as a result of participation in the budgetary process. The amount of slack created has a positive relationship with risk aversion but increase in social pressure can reduce the extent of slack created.
2.	Dunk (1993)	Information asymmetry Budget participation Budget emphasis	79 managers 46 companies	There is support that when budget participation, budget emphasis and information asymmetry is high, budgetary slack is reduced and vice versa.
3.	Dunk & Perera (1997)	Participation	7managers	Findings suggested that managers were aware that participation provided them with the opportunity to build slack into their budgets. However, they did not necessarily attempt to do so for reasons that include moral, ethical and career advancement considerations.
4.	Chow, Cooper & Waller (1988)	Information asymmetry	40 college students	The difference in slack created under truth-inducing and slack-inducing pay schemes is greater when there is superior-subordinate information asymmetry about

				capability of the performance of subordinate.
5.	Van der Stede (2001)	Budgetary control Strategy	153 managers 37 companies	Tight budgetary controls and high incentives effectively reduce budgetary slack. Business units that pursue differentiation strategy enjoy more budgetary slack. Corporate diversification is positively associated with slack in business unit budgets.
6.	Merchant (1985a)	Participation Technology Budgetary control	170 managers 19 companies	Participation in budgetary process reduces extent of slack creation. Technological uncertainty has a weak negative effect on slack creation. Budgetary control does not significantly increase managers' propensity to create slack except when budget is tight. Ability to detect slack by superior reduces managers' propensity to create slack.
7.	Stevens (2002)	Reputation Ethics	52 college students in a laboratory setting	Reputation and ethics are negatively associated with budgetary slack.
8.	Maiga & Jacobs (2007)	Fairness Trust	163 managers in 13 organisational types	Procedural fairness and trust are found to have a significant impact on budget goal commitment which, in turn, negatively influences managers' propensity to create slack.

APPENDIX 4D

TABULAR PRESENTATION OF CONTINGENCY VARIABLES USED IN PRIOR MCS STUDIES

S/No.	Contingency Variables	Author(s)	Sample/ Respondents	Findings
1.	Strategy	Simons (1987)	76 managers 12 companies	There is a negative relationship between tight budget goals and performance when defenders use control systems less intensively. Bonus remuneration is emphasised based on achievement of budget targets. The extent of importance attached to data forecast in control systems, setting of tight budget goal, monitoring of outputs, frequency of reporting and use of uniform control systems in lower under defenders compared with prospectors.
		Chenhall & Morris (1995)	154 SBU managers 72 companies	Entrepreneurial firms exhibit a stronger association between enhanced performance and the interaction of organic processes with use of management accounting systems compared with conservative firms.
		Govindarajan (1988)	121 SBU managers 24 companies	SBU's which employ low cost strategy are more effective when they use a high budget-based evaluative style. while firms which use differentiation strategy have a higher level of performance when there is low budget emphasis. Higher performance is enhanced when there is a 'fit' between the strategy of the firm and some variables (budget evaluative style, decentralisation and locus of control).
		Van der Stede (2000)	153 managers 37 companies	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.
		Chenhall, Kallunki & Silvola (Forthcoming)	100 CEOs in 10 types of industry.	Product differentiation strategy appears to encourage organizations to engage in more social networking, and to implement organic innovative cultures and formal controls. There is support for the arguments for the crucial role of strategy in the design of MCS.
2.	Environment	Otley (1978)	41 managers 1 company	In a Laissez-faire environment, rigid performance evaluative style is effective while flexible style is required in harsh environment.
		Ezzamel (1990)	81 directors from Times 1000 list of UK companies	Budget participation, budgetary evaluation, interaction with superior and explanation of variances have a positive relationship with perceived environmental uncertainty.
		Linn, Casey, Johnson & Ellis (2001)	200 managers from Fortune 1000 firms	Budgetary slack has a significant positive relationship with perceived environmental uncertainty and budget emphasis.
		Ajibolade, Arowomole & Ojikutu (2010)	144 manufacturing companies	Perceived environmental uncertainty has a strong moderating effect on the relationship between management accounting system design and performance. Companies with high PEU appear to perform better when more sophisticated management accounting system designs are adopted.
3.	Culture	Harrison (1992)	211 managers 28 companies	Low budget emphasis style has a relationship with higher job satisfaction and job-related tension in Australian companies while high budget emphasis is associated with lower job-related tension and higher job satisfaction in Singaporean companies.
		Ueno & Sekaran (1992)	70 managers from U.S companies 149 managers from	Japanese companies use less communication and coordination, build less slack in the budget and make use of long-term performance evaluation than U.S.

			Japanese companies	companies.
		O'Conner (1995)	125 managers from: 14 local and 30 foreign subsidiary companies in Singapore	Reduced budget participation in foreign subsidiary companies cause higher role ambiguity and worsen the relationship between the superior and the subordinate. There is a relationship between participation and superior/subordinate relationship when participants perceived that the process is providing them greater "influence" and "contribution" in local companies.
		Tsui (2001)	89 sub-unit managers 7 companies	For Western managers, the relationship between management accounting systems and managerial performance is positive for high levels of participation while this relationship is negative for Chinese managers.
4.	Size	Otley (1978)	41 unit managers in a large organisation	Higher budget emphasis and budget-oriented style is associated with larger operating units.
		Merchant (1981)	170 managers 19 electronic companies	Larger firms show higher performance when an administrative approach to budgeting is used. Better performance is associated with more interpersonal approach in smaller firms.
		Merchant (1984)	170 managers 19 electronic companies	Size, functional differentiation and extent of automation in production process cause greater formality in the budgeting process.
		Powell (1994)	113 CEOs in U.S. companies from furniture and clothing industry	The relationship between financial performance and planning is greater among larger firms than small firms. Size has no moderating effect on the significant relationship which exists between strategic planning and sales growth. There is a significant positive relationship between profitability and strategic planning but when firm size is held constant, the relationship is spurious.
		Davila (2005)	95 managers from Technology-based firms	The emergence of formal control systems in the early stages of growth of a firm is motivated by size. The study concluded that size is a relevant explanatory

				variable of MCS.
5.	Fairness Trust	Maiga & Jacobs (2007)	163 managers in 13 organisational types	Both procedural fairness and trust are found to have a significant impact on budget goal commitment which, in turn, negatively influences managers' propensity to create slack. The direct relationship between budget participation and manager's propensity to create slack was insignificant, which suggested that fairness and goal commitment mediate the relationship between budget participation and manager's propensity to create slack.

