

**THE EFFECT OF ENTERPRISE RESOURCE PLANNING  
SYSTEMS ON MANAGEMENT ACCOUNTING PRACTICES IN  
NON GOVERNMENTAL ORGANISATIONS OPERATING IN  
KENYA**

**BY**

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## **DECLARATION**

This research project is my original work and has not been submitted to any other University or College for Examination purposes.

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This research project has been submitted for examination with my approval as the University Supervisor

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## **DEDICATION**

To my Wife and Son.

## **ABSTRACT**

This study sought to investigate the effect of ERP systems implementation on management accounting practices in NGOs operating in Kenya. To accomplish this goal, the study was guided by a sole research objective; to establish the effect of enterprise resource planning systems implementation on management accounting practices in non-governmental organizations operating in Kenya.

The study used a descriptive research design. The target population was all NGOs operating in Kenya which according to NGOs Coordination Board are 6,075 (2009). Non-probabilistic sampling methods such as purposive sampling and snowballing techniques were used to select a sample of 40 NGOs. The sample comprised of two equal strata; one consisting of NGOs with ERPs and another one comprising of NGOs without ERPs. Respondents were senior finance or accounting personnel. Primary data was collected using a closed questionnaire.

This study concluded that ERP systems' implementations have a weak positive effect on management accounting practices in NGOs operating in Kenya. Evidence shows that ERP systems have reinforced traditional management accounting practices. The study has confirmed that ERP systems are weak in driving strategic oriented changes in management accounting. The evidence further suggests that there is a possibility of other variables that influence management accounting practices and which would be better analysed using longitudinal in-depth methodologies.

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## **LIST OF ABBREVIATIONS**

ABC	Activity Based Costing
BSC	Balanced Scorecard
ERPs	Enterprise Resource Planning Systems
GOK	Government of Kenya
IMA	Institute of Management Accountants
IT	Information Technology
INGOs	International Non Governmental Organizations
NGOs	Non Governmental Organizations
ODA	Overseas Development Aid

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# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Enterprise Resource Planning systems (ERPs) have been adopted in different organisations with differing degrees of penetration and success (Aernoudts, Boom, Vosselman, and Pijl, 2005). There are clear signs that certain technologies which are usually taken for granted, for instance the internet and ERPs, have and will change the organisational processes of accounting yet very little is known about these change mechanisms (Granlund, 2009).

Although it is widely acknowledged that information technology (IT) plays an increasingly important role in the field of accounting, the relationship between IT and management accounting and control has been studied relatively little (Granlund, 2009). Spraakman and Rodriguez (2010) assert that ERPs are technological changes which if prevalent, have the potential to change the context in which management accounting must function.

Non Governmental Organisations (NGOs) control about 12% of the total Overseas Development Aid (ODA) budget (Development Initiatives, 2012). The number of NGOs and the scope of their work have increased significantly in the last 30 years. NGOs are perceived as being more effective in delivering development aid as well as being more flexible and responsive than governments and multilateral agencies. NGOs operate in the complex development work and in difficult environments and it can thus be argued that they should have stronger and more developed management

structures than for-profit businesses. The organisational structures of NGOs are often very similar to for-profit organisations, and many of the tools developed to strengthen businesses and make them more profitable are applied to NGOs to make them more effective and accountable (Walsh and Lenihan, 2006).

### **1.1.1 The Concept of Enterprise Resource Planning Systems**

Starting in the late 1980's and early 1990's new software systems known as enterprise resource planning systems (ERPs) surfaced targeting mainly large and complex organisations (Rashid, Hossain, and Patrick, 2002). ERP systems are complex, powerful and expensive. They are off the shelf solutions and they require consultants to tailor and implement them based on the organisations' requirements.

An ERP can be defined as a software system for business management that encompasses modules that support functional areas (Rashid et al 2002). The core of an ERP system is a centralised database that stores, coordinates the analysis and dissemination of data throughout the organisation (Hyvonen, 2010).

### **1.1.2 The Concept of Management Accounting**

Management accounting can be described as a process of supplying managers and employees with the relevant financial and non-financial information for decision making purposes (Atkinson, Kaplan, Matsumura and Young, 2012). Management accounting creates value for all types of organisations as they strive to execute a strategy that delivers long term value to all stakeholders (Atkinson et al 2012).

Drury (2008) defines management accounting as the provision of information to people within the organisation to facilitate the decision making process. Managers also require information to be able to improve efficiency and effectiveness of organisational operations. The information provided is both financial and non-financial in nature.

### **1.1.3 Effects of ERP on Management Accounting**

Recent management accounting literature shows increasing interest on the effect of ERPs on management accounting (Hyvonen, 2010). Scapens and Jazayeri (2003) found out that although ERP systems have not caused fundamental changes on the nature of management accounting information, there have been changes on the role of the management accountant. They in particular noted: elimination of routine jobs, more forward looking information, a wider role for management accountants and elimination of line managers with accounting knowledge. They however did not claim that ERPs were drivers of these changes but rather their characteristics opened up opportunities and facilitated changes that were already taking place.

Due to a variety of theoretical and methodological perspectives, the knowledge of the subject matter is rather fragmented and this has led to a low accumulation of knowledge on the issue (Hyvonen, 2010).

#### **1.1.4 The NGO Sector in Kenya**

The NGO Co-ordination Act 1990 defines a Non-Governmental Organization (NGO) as “a private voluntary grouping of individuals or associations not operated for profit or other commercial purposes but which have organized themselves nationally or internationally for the benefit of the public at large and promotion of social welfare, development, charity or research in the areas inclusive of, but not restricted to health, agriculture, education, industry and supply of amenities and services”.

The last decade has witnessed -substantial growth in the number of organizations registered under the NGOs Co-ordination Act of 1990. The sector recorded significant growth between 2001 and 2007 which could be attributed to the impact of globalization and the opening up of democratic space in Kenya. (Government of Kenya, 2009)

Since 2001, the sector has been growing at the rate of 400 organizations per year. By August 2009, the NGO Coordination Board had cumulatively registered 6,075 organizations. These organizations are spread all over the country and vary from small organizations operating locally, to international ones, international NGOs (INGOs), with regional/international programmes. They range from organizations ran by small teams of volunteers to mega organizations with hundreds of fully paid staff of diverse professions and sophisticated systems and processes. They reflect diversity in their activities from welfare, to environment, human rights, gender, agriculture and education among others. Further, they employ various strategies ranging from policy and advocacy to research and training, consciousness-raising to information and

communication. NGOs in Kenya encompass organizations with modest budgets of a few thousand shillings to those managing over a billion Kenya shillings per year. (GOK, 2009)

A total of KES 68.8 billion was received by NGOs as donations to fund various projects in 2005/6. These included traditional sources such as donor organizations and Government agencies, while non- traditional sources were in the form of contributions by NGO officials, members and community contributions (GOK, 2009).

## **1.2 Statement of the Research Problem**

ERPs have recently emerged as the most advanced administrative corporate IT solutions (Granlund and Malmi, 2002). The industrialized world has witnessed an increase in the implementation of these integrated software packages which require significant investments of organizations' monetary and intellectual resources. Adoption of ERP systems has enabled organizations to integrate business applications and respond to real time information. ERP systems have significantly changed the way data is collected, stored, disseminated and used. This change in information processing orientation has affected the accounting process (Sutton, 2006). Granlund (2009) argues that although it is widely acknowledged that IT plays an important role in accounting, there aren't enough studies on the relationship between IT and accounting, especially as regards management accounting.

Since the early 2000s, the interaction between ERPs and management accounting has constituted a research topic of particular interest, and there is a growing body of



literature in this area. Despite the fact that considerable research has been devoted to the effect that ERP systems have upon both management accounting practice and the role of the management accountant, no clear conclusions on these issues can be drawn (Vakalfotis, Ballantine, and Wall, 2011) . This is due to the fact that, up to now, most research has tended to focus on describing changes in management accounting resulting from ERP implementations rather than focusing on analyzing and understanding them (Vakalfotis et al, 2011). In other words, whilst researchers have indicated how ERP systems may have an effect on management accounting practice and on the management accountant's role, they have largely neglected to consider the explanatory variables of these impacts. As a result, Sutton (2006) argues that the extant empirical findings have been a poor guide to those interested in ERPs and management accounting.

At the same time, it is increasingly important to understand the impact of ERPs on management accounting (Sutton 2006; Granlund and Mouritsen 2003; Rom and Rohde 2007; Granlund, 2011) for the following two reasons. Firstly, such systems appear to have the potential to facilitate practitioners' endeavours to advance management accounting practice in order to improve control and planning within their businesses; thus, practitioners need to know whether and how these systems can meet expectations. Secondly, such systems drive semantic changes in the occupational identity of management accountants; thus, they need to know what skills they should add to their portfolio in order to respond to the demands of their new roles, and, in the long run, remain indispensable in their businesses. To date, there is a lack of research which has attempted to provide a sufficient explanation for the differences among

ERP adopting firms with regard to the perceived management accounting changes of ERP implementations (Vakalfotis et al, 2011).

Several studies have been done on ERP implementations in various industries in Kenya. Whereas these studies have been dedicated to the concept of ERPs implementations, none was found on the NGO sector and in particular with relation to management accounting (Cheboi 2010, Wairimu 2011, and Wanjiru 2012). This study therefore aimed at filling this gap by setting out to establish the effect of ERPs implementations on management accounting at NGOs operating in Kenya. The study aimed at answering the following research question:

1. What is the effect of ERP systems implementation on management accounting practices in NGOs operating in Kenya?

### **1.3 Research Objectives**

This study had one objective namely;

1. To establish the effect of enterprise resource planning systems implementations on management accounting practices in non-governmental organisations operating in Kenya

### **1.4 Value of the Study**

The study shed light on a type of an organisation that had not been extensively studied in the public setting management literature. In particular, the study provided stimulus for further research in the field in order to further examine the relationship between

ERP systems and management accounting. The study would also be of use to organisations that have or are considering moving their accounting systems and operations to an ERP system.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This section reviewed literature pertinent to the subject of this study. The chapter begins with the definition of the key concepts and concludes with an overview of the key learnings.

### **2.2 Management Accounting**

In its simplest terms, management accounting comprises that branch of accounting which seeks to meet the needs of managers. One can argue that management accounting was first practiced when managers began to receive information about their businesses. The general use of the term ‘management accounting’ is however comparatively new (Ryan, Scapens, and Theobald, 2002).

The Institute of Management Accountants (IMA) defines management accounting as “a profession that involves partnering in management decision-making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization’s strategy”. Horngren (2004) widens the information set by pointing out that management accounting provides non financial information as well to enable managers fulfil the goals of the organisation. Management accounting can be broken down into four sub-sections and this hopefully elaborates the multifaceted features of the concept (Rom 2008).

### **2.2.1 Management Accounting Tasks**

Tasks are an essential part of the definition of management accounting. Management accounting tasks include data collection, measurement, analysis, and reporting. Research on the relationship between management accounting and information systems indicates that a distinction between different tasks is needed.

### **2.2.2 Management Accounting Techniques**

In order to produce information that can be reported to managers, a choice on the management accounting technique (model) to apply must be made. Techniques such as activity-based costing (ABC), target costing, strategic management accounting, the balanced scorecard (BSC), contribution margin analysis and life cycle cost analysis are well known examples of management accounting techniques.

### **2.2.3 Organisation of Management Accounting**

Tasks and techniques cannot provide information to managers by themselves. Management accounting tasks must be delegated to people within organisations. The dispersion of management accounting tasks within organisations is an emerging area within which research must be conducted. ERP implementations seem to open up new ways through which management accounting and control can be dispersed throughout the organisation.

## **2.2.4 Behaviour, Use and Perceptions In Relation To Management Accounting**

This can be viewed from a functionalist as well as from an interpretive perspective. Within the functionalist paradigm, the behavioural consequences of implementing new management accounting practices are studied as well as how accounting information systems are used. From an interpretive point of view, management accounting is considered to be non-human actors which just like human actors have the ability to play a role.

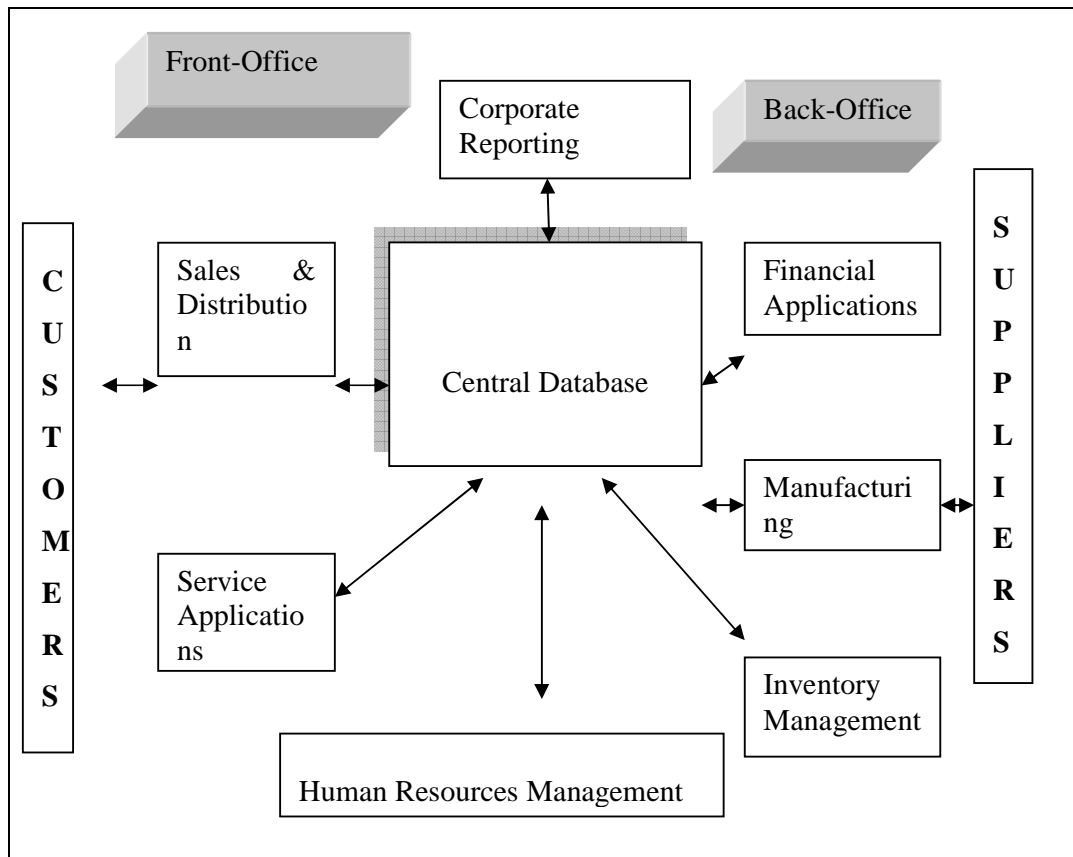
## **2.3 Enterprise Resource Planning Systems**

ERP is a broad term that refers to any software that has the capability to integrate all business processes and data into a single system. ERP systems can also be described as integrated software packages that control all personnel, material, monetary, and information flows of an organisation (Waxer, 2006).

ERP systems are modular in the sense that each business function (such as sales, financial accounting and human resources) can be implemented at an organisation's discretion. This implementation of modules to support business functions allows for integration of information within an organisation. This integration stems from the possibility of using one central database as all data gathered from the business functions is stored in one central database that is accessible from all locations (Aernoudts et al, 2005).

ERPs are off-the-shelf solutions that require consultants to tailor and implement and often times force organizations to reengineer their business processes to fit into the software's logic (Rashid et al 2002). The architecture of the software facilitates transparent integration of modules, providing flow of information between all functions within the enterprise in a consistently visible manner (Rashid et al 2002).

Figure 1: ERP systems concept



Source: Rashid et al 2002

## **2.4 Review of Empirical Studies**

ERP systems are generally designed and introduced by non-accountants but are usually closely connected with the accounting processes. This therefore means that such systems should have implications for all areas of accounting (Chapman 2005; Sutton 2006). Booth (2000) carried out a systematic study of 55 Australian firms in an attempt to establish whether organisations with ERP systems experience higher levels of information integration, improvements in terms of reporting and decision-making, and a greater use of sophisticated accounting techniques.

The study's findings indicated that ERP systems are effective in supporting information processing but less so for reporting and decision making support. The study also indicated that ERP systems do not provide an incentive for the adoption of sophisticated accounting techniques. A similar study by Spathis and Constantinides (2003) also established that the most highly perceived benefits of ERP implementations were increased flexibility in information generation, and improved quality of reports. No significant improvements were experienced by the surveyed firms with regard to the time required for issuing reports and the decision making process.

Spraakman (2005) carried out a study on 31 large Canadian companies in an attempt to establish whether ERP systems implementations have the capacity to change management accounting and control processes. The study findings indicated that half of the responding companies had their management accounting and control processes affected by the ERP system.



The effects on the management accounting and control systems stated in descending order were: increased efficiency, faster and automatic production of reports, more accuracy, greater integration among operations and systems, greater emphasis on operational data particularly for supply chain management, improved processes and compensating controls.

This study further indicated that the changes attributed to ERP systems were minor rather than fundamental. Traditional management accounting practices were still being used, albeit with a few adjustments, despite the increasing prevalence of ERP systems.

Doran and Walsh (2004) studied the impact of ERP systems upon management accounting and the role of the management accountant. Unlike previous studies, this study established a strong link between ERP systems and management accounting with regard to utilisation of sophisticated management accounting techniques and an advancement in the role of the management accountant. The management accountant was freed from routine manual tasks and this created more time for information analysis and support in key decision making. Sangster (2009) also points out that a successful ERP implementation allows the management accountant to engage in more value adding activities such as information analysis. A poorly implemented ERP system however, limits the role of the management accountant who continues to perform routine tasks in a complex work setting. This study also suggested a set of key skills that the management accountant should possess to be effective in an ERP environment that include IT competencies, cross functional working relationships, analytical, and consulting abilities.

The above studies, which are positivist in approach, point to two possible conclusions. First, ERP systems appear to be associated with transaction oriented changes in management accounting and second, ERP systems appear weak in driving strategic-oriented changes in management accounting as they reinforce the use of traditional management accounting practices.

A number of studies, which have employed an interpretivist approach, have also been conducted in addition to the above studies. Granlund and Malmi (2002) report that ERP systems have little impact on management accounting practices and strategic management accounting practices used in the organizations studied were not supported by the ERP system. With respect to the role of the management accountant, the researchers find that ERPs have reduced the amount of time spent on routine tasks and this has allowed management accountants to focus on more value adding activities. Scapens and Jazayeri (2003) observe that ERP systems have a moderate impact on management accounting practices. They argue that the ERP system was not the driver of the observed changes but rather the characteristics of the ERP system opened up certain opportunities and facilitated changes that were already occurring in the organisation studied.

Caglio (2003) carried out an in-depth case study of an Italian pharmaceutical company in an attempt to investigate the impact of ERP systems on the role of the management accountant. The study found out that the ERP system enabled widespread changes to take place on the role of the management accountant. The ERP system was now playing a greater role in data gathering and generation of management accounts and reports. As a consequence, the management accountant

was now losing control over his traditional tasks and was now expected to focus on analyzing of information coming out of the ERP system to support decision making processes. These findings largely confirmed those reported by Granlund and Malmi (2002).

The most recent interpretivist study was carried out by Grabski et al (2009) and it sought to investigate the relationship between ERP systems and management accountants in seven large UK companies. The study sought to establish if there is a link between the level of ERP system implementation success and the extent of change in the role of management accountants. The study made notable findings. First, successful ERP implementations resulted in significant changes on the role of the management accountant as management accountants could now focus on information analysis and interpretation to aid the decision making process. A less than successful ERP system implementation reinforced traditional management accounting practices. Secondly, participation of management accountants in the implementation process was critical to its success. The final observation was with respect to the skills set required of management accountants in the post implementation phase. The study suggested that management accountants needed to acquire new skills to be more effective in their new roles. These skills include IT competency, interpersonal, leadership, analytical, decision-making, and planning skills.

## **2.5 Review of Theories**

There has been a considerable diversity in management accounting research in recent years and the subject is yet to become a single intellectual discipline (Ryan et al, 2002). As such, there isn't a central core, or paradigm to lead research in management accounting. However, the available range of research approaches can be used together to provide useful insights into the subject (Ryan et al, 2002).

### **2.5.1 Interpretive Approaches**

Management accounting is viewed as socially constructed and can consequently be changed by the social actors. As such, there is no need to look for universal laws and generalisations but rather for rules, both explicit and implicit, which structure social behaviour (Ryan et al 2002).

Accounting provides a set of meanings which is drawn upon in organisations but which is itself an outcome of organisational activities. Detailed studies of accounting practices are required in order to study accounting from this perspective. Researchers study accounting as part of a unified social system using a holistic orientation. Such research enables researchers to interpret management accounting a social practice (Ryan et al 2002).

### **2.5.2 Positive Accounting Theory**

Positive theories are concerned with explanation and prediction (what does/ will happen) and are grounded in empirical data (Ryan et al, 2002). Since they are grounded in empirical data, they appear to offer accounting researchers the prospects

of avoiding value judgements associated with normative theorists. Positive researchers cannot assist a decision maker to choose a particular model but rather they help the decision maker understand how the relevant variables interact in the real world (Ryan et al 2002).

### **2.5.3 Practice-Oriented Research**

This approach to management accounting research arose in the 1980's when there was recognition that there existed a gap between theory and practice. Management accounting practitioners were of the opinion that existing theory was too abstract and unrelated to their needs (Ryan et al 2002). This stream of research is primarily concerned with the development and application of new techniques of management accounting.

In addition to the development of new techniques, this approach attempts to examine the validity of Johnson and Kaplan's (Relevance Lost) criticisms of management accounting practice. This form of research draws on a wide range of theoretical frameworks to address management accounting issues. Different research methods and methodologies are not viewed as competing but are rather used together to provide a variety of insights into a wide range of management accounting research questions (Ryan et al 2002).

## **2.6 Conclusion of the Literature Review**

ERP systems appear to exert significant influence on the transactional aspects of management accounting but appear to have only a moderate impact at strategic level. Although the literature review has highlighted the changes that may occur to management accounting, it can be argued that the relationship between management accounting and ERP systems is still obscure (Granlund, 2011). Present review of literature shows that previous studies have only attempted to describe the changes in management accounting rather than carefully analysing and understanding these changes.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter is intended to give details of the research design that was employed to achieve the objectives of the study. The areas covered are research design, the population of the study, sample design, data collection instruments and procedures and the data analysis procedures applied.

### **3.2 Research Design**

The study applied a descriptive survey research design. Descriptive research includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research design is a description of the state of affairs as it exists at present (Kothari, 2003). The design involved primary research methods for the collection of primary data. The rationale for using this design is that it explores the existing status of two or more variables at a given time.

### **3.3 Population**

The target population was all NGOs operating in Kenya. According to the NGOs Coordination Board there were 6,075 NGOs registered to operate in Kenya (2009).

### **3.4 Sample Design**

The sample for the study consisted of 40 NGOs operating in Kenya; selected through non-probabilistic sampling methods. This method was appropriate since it would satisfactorily meet the study objectives. The sample comprised of two equal strata; one comprising of NGOs that have implemented ERP systems and another strata comprising of NGOs that have not implemented ERP systems to act as a control sample. The respondents were senior finance/accounting personnel.

### **3.5 Data Collection**

This study utilized primary data. Primary data was obtained through a closed questionnaire. The questionnaire was divided into two sections. One section dealt with general information and the other section dealt with the study variables. The questionnaires were distributed through drop and pick method.

### **3.6 Data Analysis**

The data were coded and entered into a spreadsheet and analysed using descriptive statistics namely frequency tallies and the corresponding percentages. The statistics were generated using Statistical Package for Social Sciences (SPSS) Version 20. Data was analyzed using one regression model:

$$1) Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e$$

Where Y= Management accounting practices

$B_0$  is the estimate for Y when  $X=0$



$B_i$  is the change in Y for a 1 unit change in X

$X_1$  is integrated information systems

$X_2$  is centralised database

$X_3$  is functional modules

$X_4$  is web based applications

e is the margin of error/disturbance term

Results of quantitative data analysis were presented using tables.

### **3.6.1 Variables Definition and Measurement**

#### **Dependent Variables**

**Management accounting practices:** These refer to management accounting techniques that are applied by management accountants to produce information that can be reported to managers for decision making purposes.

#### **Independent Variables**

**Functional Modules:** Software modules that mimic major functional areas of an organisation such as production, human resources, finance, and marketing. These modules are scalable, customizable, work on the web and are efficient and easy to use.

**Centralised Database:** A centralised database holds all of an organisation's data on a central computer such as a mainframe computer or server. Users in the organisation can access the data from their own personal computers or terminal.

**Integrated Information Systems:** Refers to an expansion of a basic information system achieved through system design of an improved or broader capability by functionally or technically relating two or more information systems, or by incorporating a portion of the functional or technical elements of one information system into another.

**Web based applications:** A web based application is a software package that can be accessed through the web browser. The software and database reside on a central server rather than being installed on the desktop system and is accessed over a network.

## **Measurement**

The variables were measured using a 5 point likert scale.

### **3.7 Data Validity and Reliability**

Validity refers the extent to which a test measures what the researcher actually wishes to measure (Cooper and Schindler 2008).

#### **3.7.1 Internal Validity**

Internal validity refers to the ability of a research instrument to measure what it is purported to measure and conclusions drawn truly imply cause (Cooper et al 2008).

To ensure internal validity and overcome weaknesses of the survey method with respect to this aspect, the elements in the research instrument were adequately explained to the respondents prior to the filling of the questionnaires. Further,

preliminary data analysis findings were provided to respondents who so wished so as to test for any threats to internal validity.

### **3.7.2 External Validity**

External validity refers to the ability to generalize an observed causal relationship across persons, settings, and times (Cooper et al 2008). This study sought to achieve external validity by selecting a large sample relative to the population and by striving to achieve a reasonably high response rate.

### **3.7.3 Reliability**

Reliability is about whether the respondent answers correctly and the extent to which observations and other forms of measurement are repeatable (Rom 2008). Reliability was assured with an accurate research instrument tested on a trial respondent (s) prior to the actual field work. Refinements and clarifications were made to elicit appropriate data from the respondents. Reliability was further enhanced by making respondents feel comfortable when answering the questionnaire and by promising confidentiality.

## **CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS**

### **4.1 Introduction**

This chapter covers data analysis, interpretation and presentation of findings according to the research objective. It commences with a presentation of the general information regarding respondents, response rate and then presents results regarding the effect of enterprise resource planning systems implementations on management accounting practices in non-governmental organizations operating in Kenya.

### **4.2 Data Presentation**

#### **4.2.1 Response Rate**

This study targeted 40 NGOs comprising of 20 NGOs with ERPs and another 20 NGOs without ERPs. Responses were obtained from 34 NGOs. Out of the 34 NGOs surveyed, 16 had ERPs while 18 did not have ERPs. This represents 47.1% of NGOs with ERP as compared to 52.9% of NGOs without ERP. Table 4.1 summarizes results on response rate.

**Table 4.1: Response Rate**

<b>Category</b>	<b>Target</b>	<b>Response</b>	
		<b>Frequency</b>	<b>Percentage</b>
NGOs with ERP	20	16	47.1%
NGOs without ERP	20	18	52.9%
Total	40	34	100%

#### **4.2.2 Management Accounting Practices**

To establish effects of ERPs on management accounting practices, the study compared management accounting practices for NGOs with ERPs with those of NGOs without ERPs. Table 4.2 presents findings on the comparison of management accounting practices.

**Table 4. 2: Management Accounting Practices**

Management Accounting Practices	ERP NGOs		No ERP NGOs	
	N=16		N=18	
	M	SD	M	SD
Budgeting	4.88	.342	4.89	.323
Variance Analysis	4.81	.403	4.39	1.037
Costing	4.31	.946	4.12	1.111
Forecasting operating performance to the end of quarters/years	4.63	.619	4.28	.826
Rolling Forecasts	3.53	1.302	3.17	1.543
Balanced score card	3.00	.966	2.33	1.085
Performance management	4.06	1.124	3.35	1.367
Overhead recoveries/recharges	3.60	1.183	3.06	1.474
Brand Value Monitoring	2.00	1.095	2.06	1.249
Competitor performance appraisal	1.88	1.088	1.83	.707
Value chain costing	2.31	1.138	2.47	1.281
Responsibility Accounting	2.94	1.237	3.78	1.215
Social Accounting	3.13	1.258	3.39	1.037

\*Note: 1=Never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Always

The study analyzed traditional management accounting practices in both NGOs with and without ERP. Table 4.3 presents results of the comparison.

**Table 4. 3: Traditional Management Accounting Practices**

Traditional Management Accounting Practices	ERP NGOs		No ERP NGOs	
	N=16		N=18	
	M	SD	M	SD
Budgeting	4.88	.342	4.89	.323
Variance Analysis	4.81	.403	4.39	1.037
Costing	4.31	.946	4.12	1.111
Forecasting operating performance to the end of quarters/years	4.63	.619	4.28	.826
Overhead recoveries/recharges	3.60	1.183	3.06	1.474

\*Note: 1=Never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Always

The study further analyzed strategic management accounting practices in both NGOs with and without ERP. Table 4.4 presents results of the comparison.

**Table 4. 4: Strategic Management Accounting Practices**

Strategic Management Accounting Practices	ERP NGOs		No ERP NGOs	
	N=16		N=18	
	M	SD	M	SD
Rolling Forecasts	3.53	1.302	3.17	1.543
Balanced score card	3.00	.966	2.33	1.085
Performance management	4.06	1.124	3.35	1.367
Brand Value Monitoring	2.00	1.095	2.06	1.249
Competitor performance appraisal	1.88	1.088	1.83	.707
Value chain costing	2.31	1.138	2.47	1.281

\*Note: 1=Never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Always

### 4.2.3 Regression Analysis

To illustrate the effect of ERPs on management accounting practices, the researcher conducted a regression analysis of ERP elements and management accounting practices for both categories of NGOs with and without ERP. A regression analysis based on the model  $Y=B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+e$  was done and the results are presented in Model Summary table:



**Table 4. 5: Model Summary**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 <sup>a</sup>	.107	-.049	.579
a. Predictors: (Constant), Web based applications, There is centralized database, There are functional modules, Information systems are integrated				

According to the results presented in the model summary, web based applications, centralized database, functional modules and integrated information systems which define ERP explain only 10.7% of management accounting practices.

The F-ratio is used to test whether or not  $R^2$  could have occurred by chance alone. The F-ratio found in the ANOVA table measures the probability of chance departure from a straight line. On review of the output found in the ANOVA table, it was found that the overall equation was not statistically significant ( $F=.686, p<.609$ ).

**Table 4. 6: ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.918	4	.229	.686	.609 <sup>b</sup>
	Residual	7.698	23	.335		
	Total	8.616	27			
a. Dependent Variable: Management Accounting Practices						
b. Predictors: (Constant), Web based applications, There is centralized database, There are functional modules, Information systems are integrated						

The coefficients table sought to identify which predictors are significant contributors to the 10.7% of explained variance in Y ( $R^2=.107$ ) and which ones are not – and in what way(s) do the significant ones help to explain Y. For each predictor variable in the equation, concern is only on its associated standardized beta and t-test statistic's level of significance (Sig.). Whenever  $p < .05$ , the results are statistically significant. This means that when a p-value (Sig.) is less than or equal to .05, the corresponding beta is significant in the equation.

**Table 4. 7: Coefficients Table 1**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.279	.210		15.618	.000
	Information systems are integrated	-.029	.276	-.074	-.106	.916
	There is centralized database	-.103	.149	-.291	-.687	.499
	There are functional modules	.161	.171	.457	.939	.357
	Web based applications	.056	.169	.145	.329	.745

a. Dependent Variable: Management Accounting Practices

From this equation, there was no element of ERP that was found to have a statistically significant effect on management accounting practices when all of the variables were entered into the regression equation.

The researcher conducted a regression analysis of effects of ERP elements on management accounting practices for NGOs with ERP separately. A regression analysis based on the model  $Y=B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+e$  was done and the results are presented in Model Summary table 2:

**Table 4. 8: Model Summary 2**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665 <sup>a</sup>	.443	.195	.531
a. Predictors: (Constant), Web based applications, There is centralized database, There are functional modules, Information systems are integrated				

Based on the results presented in the model summary, web based applications, centralized database, functional modules and integrated information systems which are elements of ERP explains 44.3% of management accounting practices. This shows a difference of the results when NGOs with and without ERP are combined and when NGOs with ERP are analyzed separately.

The F-ratio that is used to test whether or not  $R^2$  could have occurred by chance alone shows that the overall equation was not statistically significant ( $F=1.786$ ,  $p<.216$ ). However, compared to ANOVA test for combined categories of NGOs ( $F=.686$ ,  $p<.609$ ), the ANOVA test shows better results for NGOs with ERP than the combined lot.

**Table 4. 9: ANOVA 2**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.013	4	.503	1.786	.216 <sup>b</sup>
	Residual	2.536	9	.282		
	Total	4.550	13			
a. Dependent Variable: Managing Accounting Practices						
b. Predictors: (Constant), Web based applications, There is centralized database, There are functional modules, Information systems are integrated						

In the coefficients table, contributions of individual predictors to variation of Y are presented. From this coefficients table, there were no elements of ERP that have statistically significant effect on management accounting practices when all of the variables were entered into the regression equation. However, comparing  $\beta$  and  $P$  values for combined regression analysis and for NGOs with ERP shows a difference. This difference however is not significant.

**Table 4. 10: Coefficients Table 2**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.407	.965		1.458	.179
	Information systems are integrated	.130	.266	.223	.489	.637
	There is centralized database	.273	.234	.314	1.167	.273
	There are functional modules	.194	.158	.440	1.228	.251
	Web based applications	-.061	.166	-.156	-.366	.723

a. Dependent Variable: Managing Accounting Practices

#### 4.2.4 Chi-Square Test

A chi-square test was performed to establish whether the difference observed between management practices for NGOs with and without ERP is statistically significance. The difference found between NGOs with and those without ERP was not statistically significant,  $X^2(144, N= 13) = 156.0, p = .233$ .

**Table 4. 11: Chi-Square Tests**

<b>Chi-Square Tests</b>			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	156.000 <sup>a</sup>	144	.233
Likelihood Ratio	66.689	144	1.000
Linear-by-Linear Association	9.932	1	.002
N of Valid Cases	13		
a. 169 cells (100.0%) have expected count less than 5. The minimum expected count is .08.			

### **4.3 Summary and Interpretation of Findings**

The study revealed that NGOs that used ERPs had higher levels of traditional management accounting practices compared to their counterparts who did not have ERPs. These findings are in agreement with Booth (2000) who found that ERP systems are effective in supporting information processing but less so for reporting and decision making support. In addition, these findings are similar to those of Spraakman (2005) who carried out a study on 31 large Canadian companies in an attempt to establish whether ERP systems implementations have the capacity to change management accounting and control processes. Spraakman (2005) found that half of the responding companies had their management accounting and control processes affected by the ERP system. According to Spraakman (2005) the effects on the management accounting and control systems stated in descending order were: increased efficiency, faster and automatic production of reports, more accuracy,

greater integration among operations and systems, greater emphasis on operational data particularly for supply chain management, improved processes and compensating controls.

Traditional management accounting practices such as budgeting, variance analysis, costing, forecasting operating performance to the end of quarter/years and overhead recoveries/recharges had almost similar mean standard scores for both NGOs with and without ERP. This is in congruence with Booth's (2000) findings that ERP systems do not necessarily provide an incentive for the adoption of sophisticated management accounting techniques. Spraakman (2005) also observed that traditional management accounting practices were still being used, albeit with a few adjustments, despite the increasing prevalence of ERP systems. However, on strategic management accounting practices such as rolling forecasts, balanced scorecard, performance management, brand value monitoring, competitor performance appraisal and value chain costing showed a slight difference for NGOs with and without ERP. The findings were a reflection of those by Spathis and Constantinides (2003) who established that the most highly perceived benefits of ERP implementations were increased flexibility in information generation, and improved quality of reports. No significant improvements were experienced by the surveyed firms with regard to the time required for issuing reports and the decision making process.

This trend was further demonstrated by a regression analysis comprising of two data sets for NGOs with and without ERP. A regression analysis for all NGOs combined showed that elements of ERP explained only 10.7% variance in management accounting practices. However, when the same regression analysis was run for NGOs



with ERP separately, results showed that elements of ERP contributed to 44.3% of variance in management accounting practices. The results of both regression analysis models showed that ERP systems' implementations have a weak positive effect on management accounting practices in NGOs operating in Kenya.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Summary of the Study**

The study sought to investigate the effect of ERP systems implementation on management accounting practices in NGOs operating in Kenya. To accomplish this goal, the study was guided by a sole research objective; to establish the effect of enterprise resource planning systems implementation on management accounting practices in non-governmental organizations operating in Kenya. The study used a descriptive research design. The target population was all NGOs operating in Kenya which according to NGOs Coordination Board are 6,075.

Non-probabilistic sampling methods were used to select a sample of 40 NGOs. The sample comprised of two equal strata; one consisting of NGOs with ERP and another one comprising of NGOs without ERP. Respondents were senior finance or accounting personnel.

Primary data was collected using a closed questionnaire. Data collected was coded and analyzed using descriptive statistics such as mean, frequencies and percentages. Regression analysis was also used to process data. Results of quantitative data analysis were presented in tables.

The study revealed that NGOs that used ERPs had higher levels of traditional management accounting practices compared to their counterparts who did not have ERPs. Traditional management accounting practices such as budgeting, variance

analysis, costing, forecasting operating performance to the end of quarter/years and overhead recoveries/recharges had almost similar mean standard scores for both NGOs with and without ERP. However, with respect to strategic management accounting practices such as rolling forecasts, balanced scorecard, performance management, brand value monitoring, competitor performance appraisal and value chain costing there was a slight difference for NGOs with and without ERP.

The trend was further demonstrated by a regression analysis comprising of two data sets for NGOs with and without ERP. A regression analysis for all NGOs combined showed that elements of ERP explained only 10.7% variance in management accounting practices. However, when the same regression analysis was run for NGOs with ERP separately, results showed that elements of ERP contributed to 44.3% of variance in management accounting practices. Although both regression analysis models were not statistically significant, the difference points to an effect of ERPs on management accounting practices.

## **5.2 Conclusions**

This study concluded that ERP systems implementation have a weak positive effect on management accounting practices in NGOs operating in Kenya. This effect is more profound in strategic management accounting practices as compared to traditional management accounting practices.

ERP systems implementations have a weak positive effect on management accounting practices. This shows that ERP systems have reinforced traditional management accounting practices.

The study has confirmed that ERP systems are weak in driving strategic oriented changes in management accounting. The study concluded that strategic management accounting has not taken root in non-governmental organizations. In addition, there could be other factors that impede adoption of strategic management accounting other than ERP systems implementation alone.

### **5.3 Policy Recommendations**

ERP systems are complex and expensive. It is therefore prudent for organizations and vendors to ensure that such systems meet their intended needs. This study recommends a review of contextual needs in developing and implementation of ERP systems. This will ensure optimum utilization and adoption by targeted organizations.

The government through the ministry of information should initiate laws and regulations that encourage organizations to utilize ERP systems. This will support adoption by organizations as well as providing opportunities for research and development of the same in the Kenyan context. The government should also encourage locally produced systems to be congruent with the local needs.

Institutions of higher learning should initiate policies that enhance training in ERP systems for their graduates. This will ensure a pool of qualified staff that will be keen to adopt and implement ERP systems. It will also encourage innovations in the field leading to improved utility from such systems.

## **5.4 Limitations of the Study**

This study had four limitations:

1. The study focused on a small number of NGOs that operate in Kenya. A much larger sample would probably have provided more useful insights. This however was not possible due to time constraints.
2. The study focused on one sector only and did not draw comparisons across different sectors in the economy.
3. The research design was a limitation. The survey method could not probe deeper why the situation is the way it is. Longitudinal approaches are best suited for further analysis.
4. The study focused on ERPs alone and not on the entire topic of Integrated Information systems of which ERP is just a component.

## **5.5 Suggestions for Further studies**

This study recommends further analysis, based among others on longitudinal in-depth methodologies, concerning the connection between ERPs and management accounting practices. The reasons for the fact that ERPs adopters have not used the new technology—which contains so much potential—in their attempts to develop management accounting, could best be explained by other contextual factors such as system complexity and lack of resources.

Further research should seek to establish effect such factors as organizational resistance, corporate culture, or the like on management accounting practices. It would also be worthwhile to replicate the same study across different sectors in the economy.

## REFERENCES

- Aernoudts, R.H.R.M, Boom T, Vosselman E.G.J, & Pijl G.J. (2005). *Management Accounting Change and ERP, an Assessment of Research*. Erasmus School of Economics.
- Atkinson, A.A., Kaplan, S.R., Matsumura, M.E., & Young, M.S. (2012). *Management Accounting: Information for Decision Making and Strategy Execution* (6<sup>th</sup> ed.). Angshuman Chakraborty.
- Booth, P., Matolcsy, Z. & Wieder, B. (2000). The impacts of enterprise resource planning systems on accounting practice – the Australian experience. *Australian Accounting Review*, 10(3), 4-18.
- Caglio, A. (2003). Enterprise resource planning systems and accountants: towards hybridization? *European Accounting Review*, 12(1), 123-153.
- Cheboi, K.C. (2010). *Enterprise Resource Planning: Assessing Post-Implementation Impacts in Selected Large Corporations in Nairobi*. Unpublished MBA Project, School of Business, University of Nairobi.
- Chapman, C.S. (2005). Not because they are new: developing the contribution of enterprise resource planning systems to management control research. *Accounting, Organizations and Society*, 30(7/8), 685-689.
- Cooper, R.D., & Schindler, S.P. (2008). *Business Research Methods* (10th Ed). Singapore: McGraw Hill.
- Development Initiatives (2012). *Data and Guides*. DI

- Doran, J. & Walsh, C. (2004). The effect of enterprise resource planning (ERP) systems on accounting practices in companies in Ireland, *The Irish Accounting Review*, 11(2), 17-34.
- Drury, C. (2008). *Cost and Management Accounting: An introduction* (7<sup>th</sup> Ed). London: Cengage Learning EMEA.
- Eoghan, W. & Helena, L. (2006). Accountability and effectiveness of NGOs: adapting business tools successfully. *Development in Practice*, 16(5), 412-424.
- Grabski, S., Leech, S. and Sangster, A. (2009). *Management accounting in enterprise resource planning systems*, CIMA Publishing, Oxford.
- Granlund, M. & Malmi, T. (2002). Moderate impact of ERPs on management accounting: a lag or permanent outcome? *Management Accounting Research*, 13, 299-321.
- Granlund, M. & Mouritsen, J. (2003). Introduction: problematizing the relationship between management control and information technology. *European Accounting Review*, 12(1), 77-83.
- Granlund, M. (2011). Extending AIS research to management accounting and control issues: a research note. *International Journal of Accounting Information Systems*, 12(1), 3-19.
- Granlund, M. (2009). *On The Interface between Accounting and Modern Information Technology*. Turku School of Economics.



- Horngren, T.C., Datar, M.S. & Foster, G. (2004). *Cost Accounting: A Management Emphasis*. (11th Ed). New Delhi: Prentice Hall of India.
- Hyvonen, T. (2010). *Exploring Management Accounting Change in ERP Context: The Four Perspectives*. Unpublished Academic Dissertation. Department of Economics and Accounting, University of Tampere.
- Kothari C.R., (2003). *Research Methodology: Methods & Techniques*. New Delhi: New Age International (P) Limited Publishers.
- NGOs Co-ordination Board (2009). *Report on the National Validation Survey of NGOs*. Government of Kenya.
- Rashid A.M, Hossain L, & Patrick, D.J. (2002). *The Evolution of ERP Systems: A Historical Perspective*. Idea Group Publishing.
- Rom, A. & Rohde, C. (2007). Management accounting and integrated information systems: a literature review. *International Journal of Accounting Information Systems*, 8(1), 40-68
- Rom, A. (2008). *Management accounting and integrated information systems: How to exploit the potential for management accounting of information technology*. Frederiksberg C: Samfundslitteratur Publishers.
- Ryan, B., Scapens, W.H., & Theobald, M. (2002). *Research Method and Methodology in Finance and Accounting* (2nd Ed). UK: Lightning Source.

- Sangster, A., Leech, S.A. & Grabski, S. (2009). ERP implementations and their impact upon management accountants. *Journal of Information Systems and Technology Management*, 6 (2), 125-142.
- Scapens, R.W. & Jazayeri, M., (2003), ERP Systems and Management Accounting Change: Opportunities or Impact? A Research Note. *European Accounting Review*, 1, 201-233.
- Spathis, C. & Constantinides, S. (2003). The usefulness of ERP systems for effective management. *Industrial Management & Data Systems*, 103(9), 677-685.
- Spraakman, G. (2005). *The impact of enterprise resource planning systems on management accounting: Some Canadian findings and suggestions for future research*. York University
- Spraakman, G. & Rodriguez, S.C. (2010). *The Impact of Information Technology on Management Accounting Practices*. York University.
- Sutton, S.G. (2006).Enterprise systems and the re-shaping of accounting systems: a call for Research. *International Journal of Accounting Information Systems*, 7(1), 1-6.
- Vakalfotis, N., Ballantine, J., & Wall, A. (2011). *A Literature Review On The Impact Of Enterprise Systems On Management Accounting*: proceedings of the eighth international Conference on enterprise systems, Accounting and Logistics, Thasos Island, Greece.

Wairimu, M.N. (2011). *Implementing Enterprises Resource Planning System at KRA.*

Unpublished MBA Project, School of Business, University of Nairobi.

Wanjiru, C.A. (2012). *Change Management Strategies Adopted by Fast Moving*

*Consumer Goods Companies in Kenya to Implement the Enterprise Resource*

*Planning System.* Unpublished MBA Project, School of Business, University

of Nairobi.

Waxer, C. (2006). Your Business in a Tiny Box. *Fortune Small Business*, 16 (10).

## **Appendix 1: Research Tool**

### **The effect of Enterprise Resource planning systems (ERPs) on Management Accounting**

This study seeks to establish the effect of ERPs on management accounting practices in NGOs operating in Kenya. Findings obtained will be used purely for academic requirements. Objectivity and confidentiality will be highly observed in obtaining and presenting the findings. Your time to provide feedback to the questions below is most appreciated.

#### **Definitions:**

##### **Management Accounting Practices**

These refer to management accounting techniques that are applied by management accountants to produce information that can be reported to managers for decision making purposes.

##### **Enterprise Resource Planning System (ERP)**

ERP is here defined as any software that has the capability to integrate all business processes and data into a single system

#### **Section 1: General Information**

- 1 Name of the Organisation.....**
- 2 Scope of your NGO**  
**Local [ ] International [ ]**
- 3 Annual Budget in Kenya Shillings.....**
- 4 Position in the Organisation.....**

## Section 2

### ERP Implementation

To what extent have the following aspects of ERP implementation been effected in your organization?

**Please do not fill this section if you answered NO to question 5 above.**

	<b>Not at all (1)</b>	<b>Little extent (2)</b>	<b>Moder ate extent (3)</b>	<b>Great extent (4)</b>	<b>Very great (5)</b>
Information systems are integrated					
There is a centralised database					
There are functional modules					
Web based applications					

### Management Accounting Practices

Do you use the following management accounting practices in your organisation?

	<b>Never (1)</b>	<b>Rarely (2)</b>	<b>Someti mes (3)</b>	<b>Freque ntly (4)</b>	<b>Always (5)</b>
Budgeting					
Variance Analysis					
Costing					

Forecasting operating performance to the end of quarters/years					
Rolling Forecasts					
Balanced Score Card					
Performance management					
Overhead recoveries/recharges					
Brand Value monitoring					
Competitor performance appraisal					
Value chain costing					
Responsibility Accounting					
Social Accounting					

Thank you for supporting this study