بسم الله الرحمن الرحيم

Islamic University- Gaza

Dean of Postgraduate Studies

Faculty of Commerce

Accounting Department

The Extent of Applying Managerial Accounting Techniques in Planning, Controlling, and Decision-Making

Applied Study on Companies Listed in Palestine Exchange (working in Gaza).

By

Husam Subhi Hilles

Supervised by

Professor Salem A. Hilles

A Thesis Submitted in Partial Fulfillment of the Requirements for

the Degree of Master of Accounting and Finance

At

The Islamic University – Gaza

2012 – 1433 H

بسم الله الرحمن الرحيم

(إقرأ باسم ربك الذي خلق .. خلق الإنسان من علق .. إقرأ و ربك الأكرم ..

الذي علم بالقلم .. علم الإنسان ما لم يعلم)

صدق الله العظيم

سورة العلق ، الآيات 1- 5

DEDICATION

I dedicate all my goodness, I dedicate this study to my mother and my father, may Allah bless both of you, and reward you with good, for giving me all love. You have always done your utmost to support and help me in every way.

To my wife, thanks a million for your support. To my beloved daughters and sons, you are in my heart forever.

All my family deserves heartfelt thanks for their support and encouragements.

My warm greetings sent to my colleagues and my faithful friends.

I dedicate this study to my beloved Arabic Palestine.

ACKNOWLEDGEMENTS

First of all, all thanks and praise are due to Allah for this job from beginning to end. Thereafter, I would like to express my gratitude and appreciation to my instructors who have offered their knowledge and encouragement.

My gratefulness and sincerest gratitude to my advisor Prof. Salem A. Hilles, for his unfailing encouragement, support, and guidance during this research. Really, he deserves all my thanks for his detailed and insightful comments, and for his valuable time.

I would like to thank Prof. Yousif Ashour and Dr. Jabr El-Da'ur for their effort in the discussion of this study.

Special thanks should be addressed to Dr. Samir Safi and Ali Sun'allah for their assistance on statistical work of the research.

I am indebted to the respondents that have filled out my questionnaires; I am much obliged to you.

Getting to this point would not have been possible without the support and help of many people. Despite all this support, all the remaining errors are mine.

Husam S. A. Hilles

Gaza, October 2012

TABLE OF CONTENTS

LIST OF TABLES

.

LIST OF FIGURES

LIST OF ABBREVIATIONS

ABC	Activity Based Costing
ANOVA	Analysis of Variances
ATM	Automatic Teller Machine
BSC	Balanced Score Card
CAPSCU	Center for Advancement of Postgraduate Studies – Cairo University
CIMA	Chartered Institute of Management Accountants
DSO	Days Sales Outstanding
FSA	Financial Statement Analysis
GAAP	Generally Accepted Accounting Principles
ISO	International Organization for Standardization
IT	Information Technology
JIT	Just In Time
MA	Management Accounting
MENA	Middle East and North Africa
PEX	Palestine Exchange
R&D	Research and Development
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SMA	Strategic Management Accounting
SPSS	Statistical Package for Social Sciences
TQM	Total Quality Management
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development

Abstract

This study aims to examine the extent of applying managerial accounting techniques and practices in implementing planning, controlling, and decision-Making process in the Palestinian companies listed in Palestine Exchange and working in Gaza strip. In order to achieve the objectives of the research, descriptive and analytical method has been used. The data employed in this research derived from a structured questionnaire distributed to fifty respondents, who are working inside the finance function in fourteen companies.

Statistical analysis and hypothesis testing revealed that respondents have a good technical knowledge in managerial accounting techniques as they have evaluated themselves, especially budgeting and financial statement analysis; but the least one is BSC. Respondents perceived that managerial accounting techniques are implemented in uneven degree in their companies in performance management functions. The results supported the positive association between respondents' managerial accounting knowledge and using it in implementing planning, controlling, and decision-making, but the correlation coefficient interlinked these relations is still low. Results reveal organizational size as an influential characteristic in explaining the relative importance of planning and controlling by using managerial accounting techniques.

The study recommends that it would be better for the Palestinian companies apply modern techniques such as TQM, BSC, and ABC in order to improve the whole company performance. Managers are recommended to focus in the ways that best employ managerial accounting techniques in setting their plans, control systems, and so, increase the quality of meaningful decision-Making in the very competitive environment as the findings revealed. The priority to gain ISO certificates is recommended. Palestinian companies are required to recognize the ability to establish separated management accounting departments integrated with all other departments. Also, Palestinian capitalists are invited to establish industrial projects.

ملخص الدراسة باللغة العربية

تهدف هذه الدراسة إلى التعرف على واقع ممارسة و تطبيق أساليب المحاسبة الإدارية في تنفيذ كل من عمليات التخطيط و الرقابة و اتخاذ القرار في الشركات الفلسطينية المدرجة في سوق فلسطين للأوراق المالية و العاملة في قطاع غزة. و قد قدمت هذه الدراسة صورة عن مدى توظيف أساليب المحاسبة الإدارية في العمل في ظل نطاق المعرفة و الفهم لهذه الأساليب لدى الفئة المستطلعة و التي تتكون من محاسبين و مدراء ماليين.

لتحقيق أهداف الدراسة تم اتباع المنهج الوصفي التحليلي و الحصول على البيانات من خلال توزيع الاستبانة على مجتمع الدراسة المكون من 14 شركة تعمل في مختلف القطاعات. و قد تم توزيع عدد 50 استبانة على محاسبين و مدراء مالية يعملون في هذه الشركات. بعد إجراء التحليل الإحصائي المناسب و اختبار الفرضيات توصلت الدراسة إلى مجموعة من النتائج أهمها: موافقة المستطلعين على تطبيق شركاتهم لأساليب المحاسبة الإدارية (الموازنات و نظام التكلفة المبني على الأنشطة و تحليل القوائم المالية و أسلوب الإنتاج عند الطلب و نظام الجودة الشاملة و نظام بطاقة الأداء المتوازن) في كل من التخطيط و الرقابة و اتخاذ القرارات و لكن بدرجات متفاوتة ، و قد أعطى المستطلعون تقييما جيدا لمدى المعرفة و الخبرة لديهم بهذه الأساليب خاصة استخدام الموازنات المالية و أسلوب تحليل القوائم المالية ، أما نظام بطاقة الأداء المتوازن فقد حصل على أقل درجة من التقييم. كما و أثبتت النتائج وجود علاقة ارتباط إيجابية بين مستوى المعرفة و الخبرة في مجال المحاسبة الإدارية لدى المستطلعين و مدى توظيف شركاتهم لهذه الأساليب في العمل الإداري. وكان من بين النتائج تحديد حجم الشركة من حيث عدد الموظفين فيها كعامل مؤثر في تفسير الأهمية النسبية لتطبيق عمليات التخطيط و الرقابة باستخدام أساليب المحاسبة الإدارية ، و أظهرت النتائج أيضا وجود حالة من المركزية في الإدارة داخل الشركات المستهدفة .

و خرجت الدراسة بمجموعة من التوصيات أهمها: دعوة الشركات الفلسطينية و المدراء فيها إلى مزيد من تسليط الضوء على أساليب المحاسبة الإدارية خاصة الحديثة منها مثل نظام الجودة الشاملة و بطاقة الأداء المتوازن و أسلوب التكلفة المبني على أساس الأنشطة لما في ذلك انعكاس إيجابي على تنفيذ عمليات التخطيط و الرقابة على الأداء و رفع مستوى كفاءة و فاعلية القرارات المتخذة لدى الإدارة . و الشركات الفلسطينية مدعوة أيضا إلى الاستفادة من الكادر المهني المتخصص لديها لإعطاء أولوية للحصول على شهادات الجودة و دراسة أمكانية إنشاء دوائر للمحاسبة الإدارية مستقلة و متكاملة مع بقية الدوائر الأخرى. كما و أوصت الدراسة أصحاب رأس المال الفلسطينيين و الرواد إلى تقديم المبادرات الاقتصادية في مجال الصناعة و التنمية.

Chapter 1: General Framework of the Research

1.1 Introduction

The management accounting's roles have been changing increasingly worldwide over the last 20 years according to many factors such as: globalization, strong competition, revolution in technology and IT systems and customer-orientation. Managerial accounting concerned with providing information to managers for use inside the organization. In the same time, managerial accounting is not mandatory; a company is completely free to do as much or as little as it wishes. Managerial accounting is not bound by generally accepted accounting principles (GAAP); managers set their own rules concerning the content and form of internal reports. The only constraint is that the expected benefits from using the information should outweigh the costs of collecting, analyzing, and summarizing the data. Other feature of managerial accounting is that it has a strong future orientation (Garrison et al., 2008).

The terms management accounting, management accounting systems, management control systems, and organizational controls are sometimes used interchangeably. Management accounting refers to a collection of practices such as budgeting or product costing, while management accounting systems refers to the systematic use of management accounting to achieve some goal. Management control systems is a broader term that encompasses management accounting systems and also includes other controls such as personal or clan controls (Chenhall, 2003).

The accounting profession is the most important and challenging profession in the world economy today, in terms of resource allocation, controlling and measuring business performance. Its role has become more important now, than at any other time in our lifetime, due to the severe impact of the global recession. The role of the Management Accountant in particular, has become more important, not only in the corporate level, but also at the national level, and even more importantly, at the international level. Management Accountants are closely involved in supporting, planning, controlling, directing, communicating and coordinating the decision-making activities of organizations in the private sector, as well as the public sector. Managers of an organization are considered to be the customers of the management accountant, so far as management accounting information is concerned, and management accountants should be continuously aware of the need to satisfy their requirements (Kariyawasam, 2009).

Furthermore, as senior management accountants may play a major role within the strategic planning process, they may be recognized as the central point for the timely provision of relevant information. Also, management accounting departments may share responsibility for the formalization of the strategy process (Nevries, Weide and Kornetzki, 2007).

This study is based on the linking between management accounting methods and the main management functions; planning, controlling and decision-making process.

An important part of planning is to identify alternatives and then to select from among the alternatives the one that does the best job of furthering the organization's objectives. Once alternatives have been identified, the plans of management are often expressed formally in budgets. In carrying out the control function, managers seek to ensure that the plan is being followed. Feedback, which signals whether operations are on track, is the key to effective control. A performance report compares budgeted to actual results. It suggests where operations are not proceeding as planned and where some parts of the organization may require additional attention. Making decisions is one of the basic functions of a manager. To be successful in decision making, managers must be able to tell the difference between relevant and irrelevant data and must be able to correctly use the relevant data in analyzing alternatives (Garrison, 2008).

The integration between management accounting systems and management functions in any company is one of many factors that could guarantee the improvement of performance. In the context of Palestinian companies listed in PEX and working in Gaza; this study dealt with six management accounting methods (Budgeting, ABC, JIT, TQM, BSC, and FSA) used in planning, controlling and decision-making, based on the perspective and the level of knowledge in managerial accounting among financial managers, accountants and internal auditors in these companies.

First chapter provides the general framework of the study including the research problem, objectives and hypothesis of a research study, and methodology (in a concise manner). The second chapter dealt with the intended management functions: planning, controlling and decision-making. Third chapter includes in details the managerial accounting methods mentioned previously. Finally, the last three chapters include the practical side analysis, interpretations, conclusion and recommendations.

1.2 The problem of the research

The research problem consists of the following main question and the sub-questions later.

Main question is*: "*What is the extent of applying managerial accounting techniques in planning, controlling and decision-making process in Palestinian companies listed in PEX (working in Gaza*)"?*

Sub-questions are derived from the main question as follow:

1) What is the current status and actual reality of applying managerial accounting techniques in Palestinian companies listed in PEX (working in Gaza)?
2) What is the effect of knowledge in managerial accounting techniques amongst financial managers and accountants in Palestinian companies, on using these techniques in planning, controlling, and decision-making in the light of the current status of competition?
3) What is the extent of applying managerial accounting techniques in planning process in Palestinian companies listed in PEX (working in Gaza)?
4) What is the extent of applying managerial accounting techniques in controlling process in Palestinian companies listed in PEX (working in Gaza)?
5) What is the extent of applying managerial accounting techniques in decision-making process in Palestinian companies listed in PEX (working in Gaza)?
6) What is the effect of the size of company (number of employees and the amount of capital) on implementing planning, controlling and decision making by using managerial accounting techniques?

1.3 The importance of the study

This study contributes to the accountancy and management Palestinian context another endeavor to explore the actual reality of applying managerial accounting techniques in implementing main management functions in a very turbulent context.

This study shows how cadres who work inside finance function can help and contribute in developing the adoption of managerial accounting techniques in Palestinian companies through their qualification accumulated from experience and education. Moreover, some factors that supposed to influence the implementation of managerial accounting techniques have been taken into consideration, such as the size of company and the degree of competition existed between rivals.

Conducting this research in English language could be considered as a new attempt to enrich Palestinian business environment in the context of global interaction.

1.4 Research objectives

1) Identify the status of applying managerial accounting techniques in Palestinian companies (working in Gaza) listed in PEX in the light of the degree of technical knowledge of respondents in management accounting.
2) Explore the level of knowledge in managerial accounting techniques and practices amongst financial managers and accountants who work in Palestinian companies in the light of the degree of competition between companies.
3) Examine the extent of applying managerial accounting techniques in implementing planning process in Palestinian companies (working in Gaza) listed in PEX.
4) Examine the extent of applying managerial accounting techniques in controlling process in Palestinian companies (working in Gaza) listed in PEX.
5) Examine the extent of applying managerial accounting techniques in decision-making process in Palestinian companies (working in Gaza) listed in PEX.
6) Identify the effect if any of both the number of employees and amount of capital in the implementation of planning, controlling, and decision-making by using managerial accounting techniques.

7) Clearly identify the difficulties and obstacles facing Palestinian companies (working in Gaza) listed in PEX related to the application of managerial accounting techniques.

1.5 Research methodology

Since this study aims to answer a "what" question; the structured descriptive-type questions are more reliant, it's more suitable to describe the context or a situation as they exist through the research question (the problem), this classify the research as a descriptive. Moreover, an analysis and an explanation of casual relationships between variables make a research considered analytical (explanatory) research.

Research strategy is a survey; the survey strategy is usually associated with the deductive approach. It's a popular and common strategy in business and management research. Surveys allow the collection of a large amount of data from a sizeable population in a highly economical way (Saunders, Lewis & Thornhill, 2003).

Data collection method is a questionnaire. Questionnaires work best with standardized questions that will be interpreted the same way by all respondents (Saunders et al., 2003). Structured questionnaire including closed-ended questions format was prepared, the first section was concerned with personal traits and characteristics of targeted company, while the second section focused on the three objectives of the study (applying management accounting in planning, controlling and decision-making) , questions' format in the second section provides (1-5) scale answers. Fifty questionnaires were sent to targeted respondents then all of them were received. Statistical Package for Social Studies (SPSS) used to analyze data and reach the results based on statistical method.

Information and data that will be obtained, used and analyzed to answer research questions and meet objectives include two types of data: one of them is relevant secondary data from books, journals, reports and web sites. Another one is primary data which is collected by questionnaires. The study population consists of employees who work inside finance function in Palestinian companies listed in PEX and working in Gaza strip, which are 14 companies of the total 48 listed companies till the date of conducting this research. The sample size is fifty respondents include financial managers, executive managers, accountants, and internal auditors.

1.6 Research Hypothesis

In the light of the research problem and research objectives, the following hypotheses have been formulated. These hypotheses will be statistically tested to find out the results and recommendations.

H1: Palestinian companies listed in PEX and work in Gaza, apply managerial accounting techniques in planning, controlling and decision-making at 0.05 levels.

H2: There is a significant relation between applying managerial accounting techniques in planning process, and the respondents' technical knowledge in management accounting, in Palestinian companies listed in PEX.

H3: There is a significant relation between applying managerial accounting techniques in controlling process, and the respondents' technical knowledge in management accounting, in Palestinian companies listed in PEX.

H4: There is a significant relation between applying managerial accounting techniques in decision-making process, and the respondents' technical knowledge in management accounting, in Palestinian companies listed in PEX.

H5: There is a positive correlation between the size of company (number of employees & the amount of capital) and implementing planning and controlling by using management accounting techniques.

H6: There is a positive correlation between the degree of competition the company faces, and its employees' knowledge of managerial accounting techniques.

H7: There is a significant difference at 0.05 levels between the respondents towards applying management accounting techniques in planning, controlling and decision-making; due to personal traits.

1.7 Research variables:

As presented in the next figure (1-1), independent variables and dependent variables are following:

Independent variables:

1. Budgets
2. Activity based costing

3. Just in time
4. Total quality management
5. Balanced score card
6. Financial statement analysis

Dependent variables:

1. Planning process.
2. Controlling process.
3. Decision-making process.

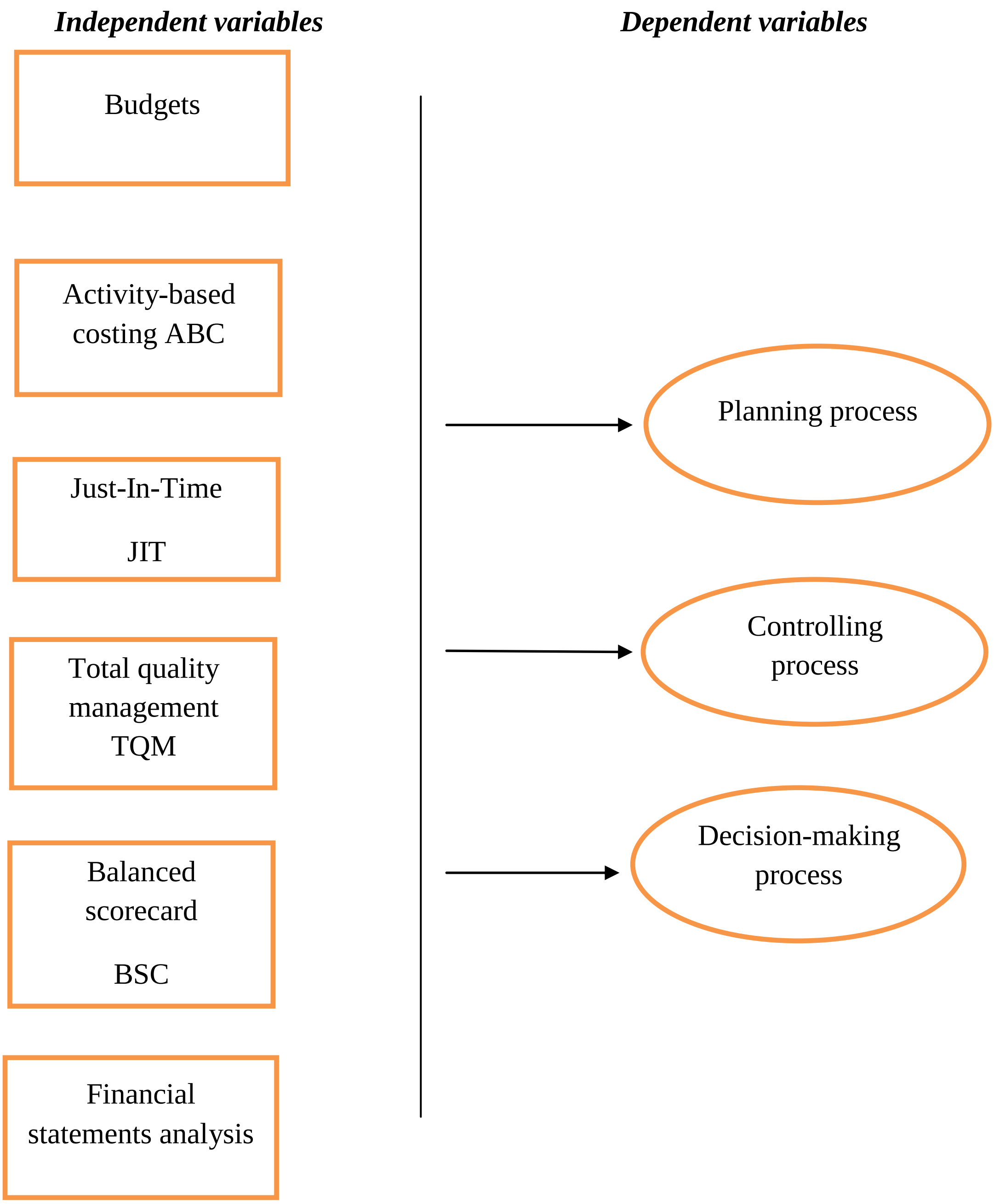

Figure (1-1): The study variables

1.8 Previous studies

There are many local and foreign studies that focused on the role of management accounting techniques which are closely linked to the organization's functions, some of these studies are presented as follows:

1) *(Jaradat, Jawabreh, Saleh and Abu-Eker, 2011): The Extent of applying the Methods of Management Accounting in Planning, Controlling and Pricing in Aqaba Hotels.*

This study aimed to know the extent to which the hotels in Aqaba depend on the management accounting methods in planning, controlling and pricing in addition to know whether there are difficulties hindering the optimal application of management accounting methods. The descriptive analytical method has been used through data collection by means of a questionnaire distributed to various hotel staff, the study society. After the statistical analysis of the questionnaire, appeared several key findings most important of which are that hotels in Aqaba use the methods of management accounting in planning, control and pricing processes in addition to the total quality management system while they do not use either linear programming in the process of identifying the alternative to be implemented nor the sensitivity analysis method to demonstrate any possible effect that can happen in the components of any future processes, the cadres of Aqaba hotels, especially the heads of departments and other staff, are not eligible to apply the management accounting efficiently unlike directors and acting directors, and the information system in the Aqaba hotels is not developed enough for the efficient application of the methods of management accounting.

The study recommends Aqaba hotels to use linear programming in identifying the alternative to be implemented , the method of sensitivity analysis to demonstrate the effect of any difference that might happen on the components of any process in the future, the models of revenues prediction in a larger extent, and the system of total quality management, increase the rehabilitation of the cadres of Aqaba hotels, especially the heads of departments and staff, and finally develop the information system at Aqaba hotels towards the efficient application of management accounting methods.

2) *(Alleyne and Weekes-Marshall, 2011): An exploratory study of management accounting practices in manufacturing companies in Barbados.*

This paper examines the management accounting practices in three manufacturing companies within a public limited group company in Barbados. Semi-structured interviews were done with a financial controller, production/operations manager and supervisor in each company. Respondents perceived that management accounting practices enable management to obtain relevant information for meaningful decision making. Budgeting was used as a control tool within the planning process and for monitoring the cash flow. The majority of management accounting practices was widely used by the sample. No sophisticated management accounting software was used to generate information other than the normal accounting software. Timeliness, technology, effectiveness, information needs and an adoption of best practice were important factors influencing the choice of management accounting practices used. Respondents perceived that the management accounting practices employed within the three entities were very effective and contributed to the success of the entities. It was also found that the management accounting practices were consistent and standardized across the group.

3) *(Yeshmin and Hossan, 2011): Significance of Management Accounting Techniques in Decision-making "An Empirical Study on Manufacturing Organizations in Bangladesh".*

Management accounting is concerned with gathering and reporting internal financial information to facilitate decision-making process. As management accounting is not required to conform to national accounting standards, it allows business to customize the management accounting techniques as per demand of company. As a process of this customization, some advanced quantitative as well as number of qualitative techniques accompany with the traditional techniques, have been emerged to cater the information need in decision making. This study attempts to measure the significance of management accounting techniques in decision making of the selected manufacturing organizations in

Bangladesh. In doing so, a total of 74 manufacturing organizations have been surveyed with a structured questionnaire by using 5 point Likert Scale measurement from different categories of manufacturing organizations. Findings reveal that cash flow statement analysis, ratio analysis, budgetary control, CVP analysis, variance analysis and fund flow analysis have been frequently high-ranking techniques. Secondly, the authors have recognized five factors to calculate the variability in decision-making with the help of rotated component matrix which shows that 75.125 % of the total variability has found in the usage of management accounting techniques. Finally, it is also found by using multiple regression model that only 25.6% of the variation in decision making of manufacturing organizations in Bangladesh.

4) *(Ndwiga, 2011): The role of management accounting in creating and sustaining competitive advantage (a case study of Equity Bank- Kenya)*

This study outlines the importance of management accounting practices in providing strategies that lead to the creation of a competitive advantage in an organization, on the basis that management accounting practices play an important role in the planning, developing, implementing and evaluating strategic competitive policies. Descriptive research has been used to investigate the relationship between variables, primary data was collected through the use of questionnaire, interviews, observation and a document analysis relating to the targeted bank. The main findings showed that 75% of respondents were of the view that there existed a strong competition in the banking industry and they felt that pricing of services at Equity Bank was lower as compared to other banks, also the respondents believed that (with high average percentage) the importance of management accounting practices in creating and developing a competitive advantage for Equity Bank. The study recommended managers to embrace management accounting as an integral part of management, the government is required to give special consideration to financial organizations that serve low-income persons, and also those low-income persons should feel encouraged to take advantage of the friendly financial services offered by emerging banks such as Equity Bank.

5) *(دراسة أبو محسن، 2009): Capability of Applying Modern Principles of Administrative Accounting at National Banks in the Gaza Strip(An Analytic Applied Study).*

This study aims at determining the capability of applying modern principles of administrative accounting at National Banks in the Gaza Strip by using the descriptive analytical approach, Sign Test, Mann-Whitney Test, and Kruskal – Wallis Test. The study found out a set of important results. First, the active Palestinian banks in the Gaza Strip have sufficient information systems and internal experience to apply the modern principles of administrative accounting which is a positive indicator to the feasibility of such application. Second, the active national banks in the Gaza strip have a positive perception that their success requires to work hard and seriously to enhance financial performance by applying the modern principles of administrative accounting. Third, the working financial information flow to the system of activity based costing (ABC) is a database to the services continuing development and improvement objectives that related to the balanced scored card (BSC) and to the activity based budget (ABB). This gains improvement to the realized returns through the optimum investment of the resources to keep the bank in its continuing activity in a competitive environment.

The study concluded a set of recommendations as follow: First, increasing awareness among the national banks managers to recognize the importance of the modern principles of administrative accounting, its role in providing suitable information for decisions making and its contribution in planning and control. Second, the need to attract staff and qualified technical experiences that able to apply the modern principles of administrative accounting efficiently and effectively in banks. Third, to improve the organizational structure in banks and determine the powers and responsibilities to commensurate with the application of modern principles of administrative accounting. Fourth, the importance of holding training courses to the active national banks in the Gaza Strip especially top level administrations.

6) *(دراسة صباح، 2008): Actual Application of Managerial Accounting Methods in The Industrial Companies in Gaza Strip (Field Study).*

This study aimed to identify the reality of applying the traditional and modern management accounting methods in the industrial companies in Gaza strip. It also aimed to identify the most applied methods in these companies and also identifying areas for the use of these methods. The study also aimed to identify the difficulties and constraints faced by companies in applying these methods and company-specific variables that affected by the use of different methods of management accounting. In order to achieve the objectives of this study, the researcher implemented the Descriptive Analytical Approach, and a questionnaire was designed and distributed to the community of study which consists of industrial companies operating in Gaza Strip, where their capitals are a half million dollars and more and there number is sixty companies. The study came up with several important results as that traditional management accounting methods are applied in the industrial companies, the actual cost method is the most method used, the cost-volume-profit analysis method follow and the least one method used is transfer prices. They also apply modern methods of management accounting. The most used method is total quality management. The companies use management accounting methods in different areas but it faces some difficulties and obstacles by medium average when applied different methods of management accounting. The study recommended that mangers of industrial companies should be aware of management accounting methods and its role in providing appropriate information for decision-making and contribute to the process of planning and control. The study emphasizes the promoting of applying different methods of management accounting in industrial companies, it also suggests making training courses in accounting methods for managers and administrative officials in industrial companies and clarifying their importance and how to apply them and the benefits that accrue to companies when applied.

7) *(دراسة الشراري، 2008):The Extent Of Using Managerial Accounting Techniques in Financial Planning and Control Operations in Jordanian Electricity Sector: An Empirical Study.*

The aim of this study is to identify the extent to which management accounting techniques are used in Financial Planning and Control Operations by Jordanian Electricity Sector Companies, the relationship between the extent of management accounting techniques use in these companies and the Demographic characteristics of the sample, determine the most benefits of using managerial accounting techniques, and the obstacles (reasons) that retard using such techniques. In order to achieve these aims, a questionnaire was developed and distributed to 54 Officers of Financial Management working in these companies, and the response rate was 89%. The researcher used in statistics analysis both One-Way-ANOVAs and One-Sample-T-Test.

The results of this study showed that management accounting techniques were not applied in these companies at a middle level. There is no relationship between management accounting techniques used in these companies and the Demographic characteristics of the sample exclude experience years. The most benefits of using these techniques are as follow: it helps in the financial control, planning operations and decision making. Finally the most cited obstacles (reasons) that retard using these techniques related to the unavailability of ready computer programs, lack of proper training, the satisfaction of management of the current using techniques, and the absence of competition. The study recommends increasing importance of these companies of managerial accounting techniques in planning and controlling operations.

8) *(دراسة الداعور ، 2008): Management accounting techniques used in Palestinian economic entities and its used limitations.*

The main purpose of this study is to explore the management accounting techniques used in Palestinian Economic Entities (PEE) and its used limitations. In order to achieve the objective of this study; a survey was conducted for all 36 economic entities which shares were marketable at Palestinian Securities Exchange (PSE). The response rate for the survey was 70%, descriptive and analytical statistical techniques were used to analyze data and then discuss the results. The findings indicate that PEE use traditional management accounting techniques more than advanced management accounting techniques, the most widely traditional management accounting techniques used are: cost-volume-profit analysis, allocating overhead cost, allocating services cost, capital budget and operating budget. Whereas, the most widely advanced management accounting techniques are responsibility accounting and contributed dividend. As well as the least widely used are product life cycles, just in time and linear programming. The study also demonstrated the most desired benefits based on the implementation of management accounting techniques such as cost reduction, quality enhancement and increase profitability. Moreover, the study determined a significant relationship between the variables: the nature of activity, entity experience, entity volume, response function, response experience and management accounting techniques. The main study recommendations are the assertion to attempt to explore benefits and importance of using management accounting techniques for administrative staff especially top management, also the researcher called professional associations and professors to concern in management accounting subject.

9) *(Sulaiman, Ramli and Mitchell, 2008): The dynamics of management accounting in Malaysia.*

This study was conducted on Malaysian registered management accountants with CIMA Malaysian Division. Data were collected through postal survey, as their members' list is confidential; CIMA Malaysian Division managed the mailing of the questionnaire, response rate was 11% (250/2346). The findings showed that Malaysian management accountants held different job titles in various functional areas within the organization such as finance, auditing, planning, control, quality assurance and managing budgets. Respondents rated the importance of several management accountant roles in their organizations during the past five years (2000 to 2004) and offered their views on how these might change in future (2005-2009). This study reveals that the practical role of the management accountants is consistently focused on entity performance evaluation, there is also a marked movement towards management accountants playing a more prominent role in formulating and implementing business strategy, and also value creation tools appear to be important management accounting tools in the near future. Future management accountants are expected to be more analytical and have a broad view of business; they are expected to use more non-financial measures. The study suggested that management accountants need to realize the potential business contribution that they expected to provide. To maintain the management accountants' relevance in this dynamic context; both pre-career and ongoing professional development requires regular redefinition to ensure training and education reflected the demands likely to be placed on Malaysian management accounting in the modern business world.

10) (دراسة زعرب، 2007): The study of using managerial accounting methods in the industrial companies in Gaza province "fieldwork study".

This study aims to clarify the application of managerial accounting methods in the industrial companies in Gaza province and the scope of using it. The researcher made a fieldwork study through a questionnaire distributed to the concerned employees. The result of the study showing that the using of managerial accounting methods by the industrial companies in Gaza Province was weak and the scope of using it.

The study recommended the encouragement of developing the ability to use the application of the Managerial accounting methods and its role to prepare the suitable information that support Managers to plan, control, the evaluation of performance and decisions Making.

11) (دراسة الحديدي، 2005): The extent to which management accounting techniques are employed in the Jordanian industrial corporations and its effects on their performance.

The study examines the methods of management accounting and the extent of applying them in the Jordanian shareholding companies.

It found that the mean of utilization ratio is 36.3%. It turns out that the total cost and the use of various loading equipment are the most used. In planning, the most used was the various operational and financial budgets and in control, the most used was the comparisons with the previous years.

12) *(Kattan, Pike and Tayles, 2005): Contingency theory of management accounting-The context of Palestine.*

This study seeks to explain management accounting and control techniques within a Palestinian context as a developed country. The study was built on the idea that the organizational survival requires the development of internal structures and processes that best meet the needs of the external environment. The methodology that was applied is the mixing of both qualitative and quantitative data collection, to answer "what" type questions researchers used a questionnaire survey and to answer "how" type questions researchers used in-depth case studies.

The importance of this study is apparent in that it is the first research study (known to the authors) to be conducted in the field of management accounting in Palestine.

The study objectives aim to identify forces that influence the design and implementation of sound management accounting and control systems in the unstable and uncertain Palestinian environment, understand how managers of these organizations are responding to surrounding forces, assess the level awareness within Palestinian organizations about management accounting and control systems, identify changes in management accounting and control systems over time as a result of changes in the level of uncertainty in the environment, examine whether differences are observed between the forces that affect design and implementation of management accounting and control systems in both service and industrial sectors, also the study compared between the significant forces influence the management accounting applying in the context of Palestine and the context of UK.

1.9 Comments on the previous studies

The common factor of these studies is the management accounting methods, either traditional or modern, as an effective variable having an impact on performance in different companies and different sectors. Some of these studies examined the extent of using management accounting methods in implementing planning, controlling, and pricing such as (Jaradat et al., 2011) or decision-making only such as (Alleyne & Weekes-Marshall, 2011 and Yeshmin & Hossan, 2011) or creating and sustaining a competitive advantage such as (Ndwiga, 2011) or planning and controlling such as (Al-Sharari, 2008) or the managerial accounting effects on the performance such as (Al-Hadidi, 2005). Other studies measured the reality of actual implementation of management accounting techniques and its limitations in specific population with a comparative between traditional and modern practices, for example (Al-Da'ur, 2008). Also, (Sabbah, 2008 and Zourob, 2007) examined the actual status quo of applying managerial accounting in industrial companies working in Gaza. (Abu-Mohsen, 2009) tested the capability of applying modern practices of management accounting in the national banks in Gaza. Otherwise, (Sulaiman et al., 2008) focused on the role of management accountants in their companies. (Kattan et al., 2005) sought to explain the reality of management accounting and control techniques within Palestine in the light of contingency theory.

Accordingly, none of the previous studies examined the extent of using management accounting techniques in planning, controlling, and decision-making in Palestinian companies listed in PEX.

The previous studies, either local or foreign, revealed the importance of managerial accounting practices within corporations in all sectors especially to improve the quality of decision-making. Moreover, previous studies demonstrated the wide range of interchange and reciprocity between management accounting techniques and the probability of improving performance and having competitive advantages over rivals.

1.10 Limitations of the study

- Respondents may have painted a favourable picture of their companies.
- When making Likert scale choices, respondents might be influenced by certain factors which are not related to the content of the questionnaire itself but which could contaminate data.
- The relatively small number of targeted companies (14) and, accordingly the number of respondents (50) from which it is difficult to make generalization to wider population.
- Since Palestinian companies listed in PEX are existed in Gaza and West bank, but it is difficult to include all these companies as a one population

community, as a result of Israeli closures and then a status of geographical and economical isolation.

- Based on the first and second limitations mentioned above, it would have been better if interviews have conducted, to attain "cross examination" of the results.

Chapter 2: Accounting for Planning, Controlling, and Decision-making

2.1 Introduction

Every organization that is looking to go on and grow up, especially in present dramatic changing world, will never accomplish its objectives without practicing managerial activities such as planning, controlling, and decision-making. These interrelated functions are concerned with managing the ongoing activities in order to achieve organization's objectives by using its resources effectively (having the intended results) and efficiently (accomplishing objectives with a minimum of resources). The plan is the road map that is taking into consideration the mobilization of resources to reach specific objectives via well-known path within a specific period of time. Management, of course, needs a benchmark to ensure sound implementation of plan, through capturing any error or deviation to take a relevant corrective action or even make some changes in the plan if necessary, every step during the preparation of plan and control later on, the manager or supervisor face the on-going challenge of making a decision, which guarantee the best practice.

This chapter is divided into three sections; the first one is about planning process, its importance in the business, its various types, and components of the business plan.

The second section deals with controlling process, its nature, prerequisites, types of control, and the requirements to achieve the best control.

The third section covers the issue of managerial decision making process in the organization, this includes the decision making environment, decision making process and the main models in the literature.

2.2 Planning

Planning, the process of determining the organization's objectives and deciding how to accomplish them, it is the first function of management. Planning is a crucial activity, for it designs the map that lays the groundwork for the other functions. It involves forecasting events and determining the best course of action from a set of options or choices. The plan itself specifies what should be done, by whom, where, when, and how. All businesses-from the smallest restaurant to the largest multinational corporation-need to develop plans for achieving success. But before an organization can plan a course of action, it must first determine what it wants to achieve.

Planning involves selecting missions and objectives and the actions to achieve them; it requires decision making, which is, choosing from the alternatives available the future courses of action. Planning bridges the gap from where we are to where we want to go (Koontz & Weihrich, 2007)**.**

2.2.1 Types of plans

Business plan could be classified into four basic types as follows according to Ferrell et al. (2006, pp. 202-203):

(1) Strategic plans

A firm's highest managers develop its strategic plans, which establish the long-range objectives and overall strategy or course of action by which the firm fulfils its mission. Strategic plans generally cover periods ranging from 2 to 10 years or even longer. They include plans to add products, purchase companies, sell unprofitable segments of the business, issue stock, and move into international markets. Strategic plans must take into account the organization's capabilities and resources, the changing business environment, and organizational objectives. Plans should be market-driven, matching customers' desire for value with operational capabilities, processes, and human resources.

(2) Tactical plans

Tactical plans are short-range plans designed to implement the activities and objectives specified in the strategic plan. These plans, which usually cover a period of one year or less, help keep the organization on the course established in the strategic plan.

Because tactical plans permit the organization to react to changes in the environment while continuing to focus on the company's overall strategy, management must periodically review and update them. Declining performance or failure to meet objectives set out in tactical plans may be one reason for revising them. Tactical plans are designed to execute the overall strategic plan. Because of their short-term nature, they are easier to adjust or abandon if changes in the environment or the company's performance so warrant.

(3) <u>Operational plans</u>

Operational plans are very short term and specify what actions specific individuals, work groups, or departments need to accomplish in order to achieve the tactical plan and ultimately the strategic plan. They may apply to just one month, week, or even day. For example, a work group may be assigned a weekly production quota in order to ensure there are sufficient products available to elevate market share (tactical goal) and ultimately help the firm be number one in its product category (strategic goal).

(4) <u>Crises management or contingency planning</u>

This type of planning deals with potential disasters such as product tampering, oil spills, fire, earthquake, computer virus, or even a reputation crises due to unethical or illegal conduct by one or more employees. Businesses that have contingency plans tend to respond more effectively when problems occur than do businesses that lack such planning. Crises management plans generally cover maintaining business operations throughout a crises and communicating with the public, employees, and officials about the nature of and the company's response to the problem. Communication is especially important to minimize panic and damaging rumours; it also demonstrates that the company is aware of the problem and plans to respond.

2.2.2 The importance of business plan

There are many important reasons for drawing up a business plan. Some of the

most significant are the following according to United Nations Conference on Trade and Development UNCTAD (2002):

- Getting an integrated view of the business.

- Mutual understanding within the management team.
- Determining financial needs and applying for funds.
- Approval from board of directors/shareholders.
- Recruiting.
- Deriving objectives for employees. (management by objective)
- Informing employees.
- Informing lenders.
- Informing partners.

2.2.3 Steps in planning

The practical steps listed below are of general application. In practice, however, one must study the feasibility of possible courses of action at each stage. Koontz & Weihrich (2007, p. 77) showed these steps:

(1) Being aware of opportunities.

Although it precedes actual planning and is, therefore, not strictly a part of the planning process, an awareness of opportunities in the external environment- in light of the market, competition, what customers want, organization's strengths and weaknesses- as well as within the organization is the real starting point for planning.

(2) Establishing objectives.

The second step in planning is to establish objectives for the enterprise and then for each subordinate work unit. This is to be done for the long term as well as for the short term.

(3) Developing premises.

The third logical step in planning is to establish, circulate, and obtain agreement to utilise critical planning premises such as forecast, applicable basic policies, and existing company plans.

(4) Determining alternative courses.

The fourth step in planning is to search for and examine alternative course of action, especially those not immediately apparent.

(5) Evaluate alternative courses.

After seeking out courses and examining their strong and weak points, the next step is to evaluate the alternatives by weighing them in the light of premises and goals.

(6) Selecting a course.

This is the point at which the plan is adopted the real point of decision making.

(7) Formulating derivative plans.

Derivative plans are almost invariably required to support the basic plan, such as plans to buy equipment, buy materials, hire and train workers and develop a new product.

(8) Providing plans numerically by budgeting.

After decisions are made and plans are set, the final step in giving them meaning is by converting them into budgets which are considered as a quantitative and financial plan (will discussed in details in the next chapter).

2.2.4 Effective planning

The main principles for having effective planning according to Center for Advancement of Postgraduate Studies- Cairo University CAPSCU (2005) are to:

1. Develop accurate forecast
2. Gain acceptance for the plan
3. Make sure the plan is sound
4. Assign responsibility for planning
5. Be objective
6. Keep the plan flexible
7. Revise the long-term plan every year
8. Make sure that the plan fits the situation

2.2.5 Planning period:

This is the question that faces the planner: "for what period of time should the business plan be prepared?" there is no straight answer to this question. There are entities planning for only one year, but there are also entities planning for ten years or more, it depends. However, statistics show that most entities tend to produce business plans projecting from three to five years, this matter depends on the type of business and kind of company.

However, as a general practice, for an average business a four year plan is reasonable. This does not mean that somebody has to plan in detail month by month, or week by week, but the level of detail will decrease as the plan extends further into the future. (UNCTAD, 2002)

2.2.6 Reasons for plans fail

If managers know why plans fail, they can take steps to eliminate the factors that cause failure and thereby increase the probability of successful chance, as CAPSCU (2005) points out, plans fail when:

1. Corporate planning is not integrated into the total management system
2. There is a lack of understanding of the different steps of planning process
3. Management at different levels in the organization has not properly engaged in or contributed to planning activities
4. Responsibility for planning is wrongly vested solely in the planning department
5. Management expects that plans development will be realized with little effort
6. In starting formal planning, too much is attempted at once
7. Management fails to operate by the plan
8. Management fails to grasp the overall planning process
9. Financial projections are confused with planning
10. Inadequate inputs are used in planning

2.2.7 Management accounting for planning

A business must plan for success, in other words deciding on a course of action to reach a desired outcome with the most effective and profitable utilization of monetary and non-monetary resources of organization. Planning must occur at all levels. First, it occurs at the high level of setting strategy, it then moves to broad-based thought about how to establish an optimum position to maximize the potential for realization of goals and objectives. Finally, planning must give thoughtful consideration to financial realities and constraints and anticipated monetary outcomes by using budgets. A necessary planning component is budgeting with its various types that will be discussed in the next chapter.

Management accounting according to Gupta (2011) incorporates planning about what should be done, how it should be done, and when. Management accounting involves forecasting on the basis of available information, setting goals, framing policies, determining alternative course of action and deciding on the program of activities to be done. Different tools of management accounting provide validity, objectivity, and reliability in business management. It is worth to say that, planning and budgeting have protected business entities from business fluctuations and various types of risk, last but not the least; management accounting has eliminated the element of intuition from business decisions. In essence, as Gupta (2011) has summarized; management accounting assess in the following ways:

1. Management accounting serves as a vital source of data for management planning process.
2. The accounting data required for managerial decisions is properly compiled and classified by management accountants.
3. It makes available to the management relevant accounting costing and other statistical data needed in planning and decision making process.
4. It analysis and presents the financial implication of alternative course of action and the effect of these on the profitability.
5. It provides means of communication by planning to the various levels of organization; moreover, it ensures the coordination of various segments in the whole plan and assists managers in directing their activities.
6. Management accounting measures actual performance against operating plans, standards and budgets with a view to interpret the results of operations to the concerned head of responsibility centres and managers at higher levels. This enables the manager in controlling function by indication the significant deviations between actual and expected activities and by adhering to the principles of selectivity.
7. Management accounting provides the methods of techniques for evaluating the performance of the management in the light of the objectives of the organization.
8. Management accounting assists in coordination operations and motivating employees.

2.3 Controlling

Planning, organizing, staffing, and directing are all important to the success of an organization, whether its objective is earning a profit or something else. But what happens when a firm fails to reach its goals despite a strong planning effort? Controlling is the process of evaluating and correcting activities to keep the organization on course.

The management control process is the process by which managers of all levels ensure that the people they supervise implement their intended strategies. It's also a process for detecting and correcting unintentional performance errors and intentional irregularities, such as theft or misuse of resources (Cam Tu, 2008, p. 25).

Controlling is a process of monitoring performance and taking action to ensure desired results, also to ensure that the right things happen, in the right ways, and at the right time. Controlling and planning are closely linked. Planning establishes goals and standards for performance. By monitoring performance and comparing it with standards, managers can determine whether performance is on target. When performance is substandard, management must determine why and take appropriate actions to get the firm back on course. In short, the control function helps managers assess the success of their plans. When plans have not been successful, the control process facilitates revision of the plans. The control process also helps managers deal with problems arising outside the firm. For example, if a firm is the subject of negative publicity, management should use the control process to determine why and to guide the firm's response (Ferrell et al., 2006, p. 206).

2.3.1 The nature of Control

The definition of management control systems has 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. This includes external information related to markets, customers, competitors, non-financial information related to production process, predictive information and a broad array of decision support mechanisms, and informal personal and social control (Chenhall, 2003, p. 129).

Management controls include all the devices, rules, regulations, and systems managers use to ensure that the behaviours and decisions of their employees are consistent with the organization's objectives and strategies, budgeting or a strategy scorecard can be categorised as a management control system. Management control is concerned both with strategic issues (the general stance of the organization towards its environment) and with operational issues (the effective implementation of plans designed to achieve overall goals), planning and control are two sides of the same coin and must be considered together (Emmanuel et al., 1990, p. 8).

A system of internal control according to Elder et al. (2010, p. 290) consists of policies and procedures designed to provide management with reasonable assurance that the company achieves its objectives and goals. These policies and procedures are often called controls, and collectively, they make up the entity's internal control. Management typically has three broad objectives in designing an effective internal control system:

1. Reliability of financial and accounting reporting.
2. Efficiency and effectiveness of operations.
3. Compliance with laws and regulations.

So that, Controlling consists of verifying whether everything occurs in conformities with the plans adopted, instructions issued and principles established. Controlling ensures that there is effective and efficient utilization of organizational resources so as to achieve the planned goals.

2.3.2 The basic control process

Control techniques and systems are essential for every work done; the basic control process involves mainly the steps shown in the following figure:

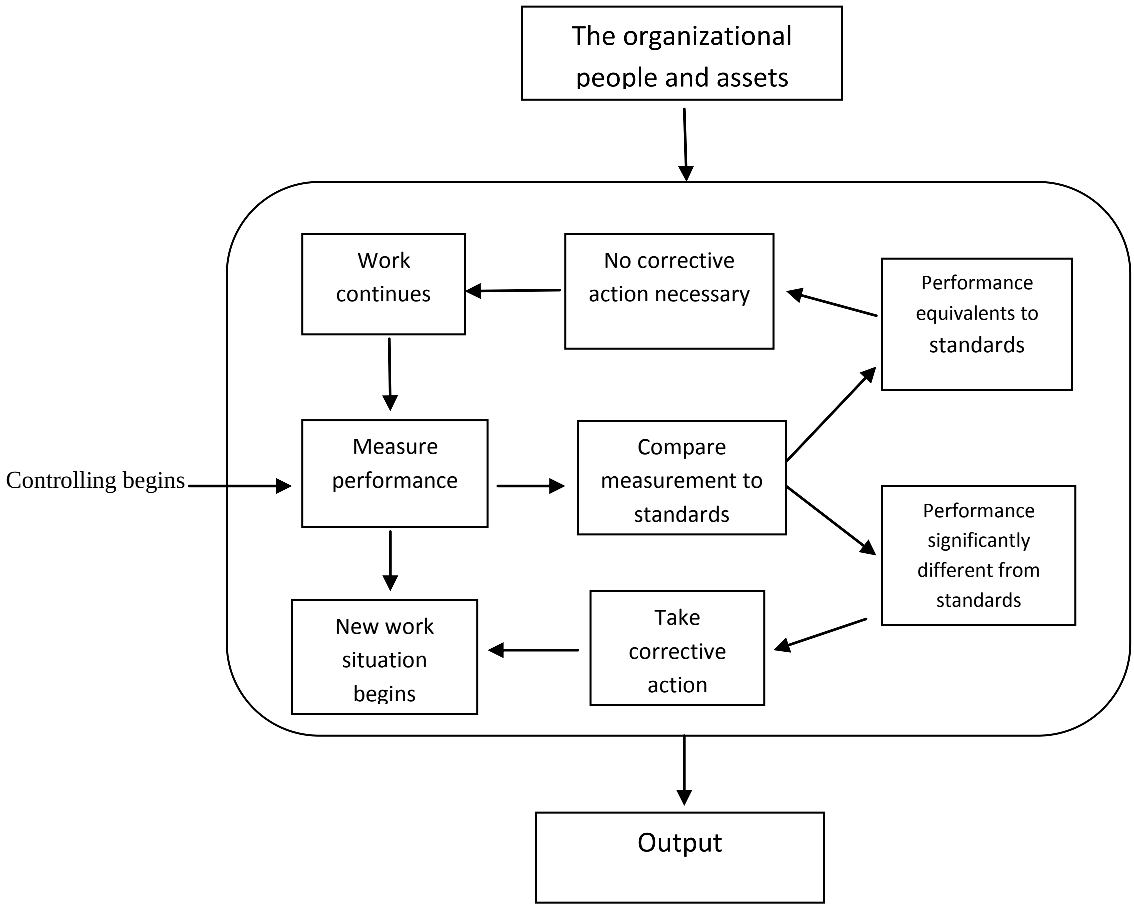

Figure (2-1): The basic control process (CAPSCU, 2005, p. 30)

2.3.3 The establishment of standards

Standards are benchmarks for measuring performance, accountants, engineers, purchasing agents, and production managers combine efforts to set standards that encourage efficient future production and attainment of organizational goals. Opinions vary about the nature of standards, but standards tend to fall into one of two categories- either ideal or practical, as Garrison et al. (2008, p. 421) classify:

Ideal standards: can be attained only under the best circumstances. They allow for no machine breakdowns or other work interruptions, and they call for a level of effort that can be attained only by the most skilled and efficient employees working at peak effort100% of the time.

Practical standards: are standards that are "tight but attainable." They allow for normal machine downtime and employee rest periods, and they can be attained through reasonable, though highly efficient, efforts by the average worker.

CAPSCU (2005, p. 31) classify various standards used to evaluate organizations' performance:

a) Profitability standards: these standards indicate how much the company would like to make as profit over a given period of time, its return on investment.
b) Market position standards: these standards indicate the share of total sales in a particular market that the company would like to have relative to its competitors.
c) Productivity standards: how much that various segments of the organization should produce is the focus of these standards.
d) Product leadership standards: these indicate what must be done to attain such a position.
e) Employee attitude standards: these standards indicate what types of attitudes the company managers should strive to indicate in the company's employees.
f) Social responsibility standards: such as making contribution to the society.
g) Standards reflecting the relative balance between short and long range goals.

2.3.4 Comparing measured performance to stated standards

There are typically five major standards available against which performance can be compared according to Emmanuel et al. (1990, p. 30):

1. The performance of the same organization in previous time periods;
2. The performance of similar organizations;
3. Estimates of expected performance made by the organization ex ante;
4. An estimate of what might have been achieved made by the organization ex post;
5. The performance necessary to achieve certain defined goals or objectives.

2.3.5 Taking corrective actions

After actual performance has been measured compared with established performance standards, the next step in the controlling process is to take corrective action, if necessary. Corrective action is a managerial activity aimed at bringing organizational performance up to the level of performance standards which have been determined in the planning stage. In other words, corrective action focuses on correcting organizational mistakes that hinder organizational performance. Before taking any corrective action, however, managers should make sure that the standards they are using were properly established and that their measurements of organizational performance are valid and reliable (CAPSCU, 2005, p. 32).

Management-by-exception for example, is a process to take any action necessary to correct or improve things during the operations. Quantity and cost standards are set for each major input such as raw materials and labour time. Quantity standards specify how much of an input should be used to make a product or provide a service, cost (price) standards specify how much should be paid for each unit of the input. Actual quantities and actual costs of inputs are compared to these standards (expectations), if either the quantity or the cost of inputs departs significantly from the standards, managers investigate the discrepancy (variance, which means expectations are not met) to find the cause of the problem and eliminate it. This process focuses managerial attention on substantial differences between actual and desired performance (Garrison et al., 2008).

2.3.6 Main types of control

There are three types of control based on the time bases (i.e. when corrective action takes place) these types are: pre control, concurrent control, and feedback control. Emmanuel et al.(1990, p. 13) distinguished mainly between feed-forward and feed-back controls:

a) Pre control or feed-forward: control that takes place before work is performed. Managers using this type of control create policies, procedures, and rules aimed at eliminating behaviour that will cause undesirable work results.
These controls make sure that proper directions are set and that the right resources are available to attain objectives. In feed-forward control instead of actual outputs being compared with system objectives, predictions are made of what outputs are expected to be at some future time. If these expectations differ from what is desired at that time, control actions are implemented that will minimize these differences.
b) Concurrent control: sometimes called steering controls, this refers to the control that takes place as work is being performed. It relates not only to

employees performance but also to such nonhuman areas as equipment performance and department appearance.

c) Feedback control or post action: these controls take place after an action is completed; it refers to the control that concentrates on the post organizational performance to take corrective action by looking at organizational history over a period of time. These controls focus on end results, as opposed to inputs and activities. A deviation between the actual result and the objective set for a process (an error) causes a control action to be implemented that will, it is hoped, reduce this error. This is described as negative feedback control, and it is evident that one objection to its use is that errors are allowed to occur.

2.3.7 Requirement for adequate control

All alert managers want to have an adequate and effective system of controls to assist them in making sure that events conform to plans. Indeed, if controls are to work, they must be specially tailored. In short, they must be tailored to plans and positions, to the individual managers and their personalities, and to the needs for efficiency and effectiveness as determined by Koontz and Weihrich (2007, p. 394):

- *Tailoring controls to plans and positions;*

All control techniques and systems should reflect the plans they are designed to follow. They should also be tailored to positions. For example, what will be appropriate for a vice president in charge of manufacturing will certainly not be suitable for a shop supervisor. Controls should also reflect the organization structure which shows that who is responsible for the execution of plans and for any deviation from them.

- *Tailoring controls to individual managers;*

Controls must also be tailored to individual managers. Control systems and information are, of course, intended to help individual managers carry out their function of control. If they are not of a type that a manager can or will understand, they will not trust it, and what they do not trust they will not use.

- *Designing controls to point up exceptions at critical points;*

One of the most important ways of tailoring controls to the needs for efficiency and effectiveness is to make sure that they are designed to point up exceptions. But this principle should best be considered on the light of the fact that effective control requires that managers pay primary attention to those things that are most important.

- *Seeking objectivity of controls;*

This requirement may be summarized by saying that effective control requires objective, accurate, and suitable standards.

- *Ensuring flexibility of controls;*

Controls should remain workable in the face of changed plans, unforeseen circumstances, or outright failures. If controls are to remain effective despite failure or unexpected changes of plans, they must be flexible.

- *Fitting the control system to the organizational culture;*

To be most effective, any control system or technique must fit the organizational culture (where people have been given considerable freedom and participation in decision making or given a little participation).

- *Achieving economy of controls;*

Controls must be worth their cost. Although this requirement is simple, it is often difficult to accomplish in practice. A manager may have difficulty in ascertaining what a particular control system is worth or what it costs.

- *Establishing controls that lead to corrective action;*

An adequate system will disclose where failures are occurring and who is responsible for them, and it will ensure that some corrective action is taken. Control is justified only if deviations from plans are corrected through appropriate planning, organizing, staffing, and leading.

2.3.8 Main barriers to successful controlling

According to CAPSCU (2005) main barriers to successful controlling are summarized as follows:

(1) Control activities can be creating an undesirable overemphasis on short-term production as opposed to long-term production.

(2) Control activities can increase employees' frustration with their jobs and thereby reduce morale. This reaction tends to occur primarily where management exerts too much control.

(3) Control activities can encourage the falsification of reports.

(4) Control activities can cause the perspectives of organization members to be too narrow for the good of the organization.

(5) Control activities can be perceived as the goals of the control process rather than the means by which corrective action is taken.

2.3.9 Management accounting for control

An internal control system is fundamental for an effective and efficient business. The internal control system is a communication system from the top of the organization to the bottom, and a response system from the bottom of the organization to the top. This may be a simplification, but nonetheless it is true that internal control system is the means by which management disseminate their policies to the lower levels and receive feedback on the effects of their communication. Without this feedback on the effects of their policies, senior management would not know if their policies had been advised to the relevant personnel and how effective they were, if at all (Trenerry, 1999, p. 4).

The internal control system provides management with the answers to the questions they ask each day. The internal control system also establishes the level of reliability of the reports by providing the check and validation of the data collected for the accounting records as well as the non-accounting information. The accounting records are required to be as accurate as possible because they are used in other related accounting activities; and thus, they depend on an effective internal control system. The accounting service functions that are most dependent on the internal control system are budgeting and forecasting, management accounting, inventory valuation and, the most vital of all, the internal audit reviews. These accounting activities are vital to the business and need accurate data from the successful operation of any internal control system (Trenerry, 1999, p. 5).

There is no single, generally accepted definition of internal control. A board definition of internal control could be expressed as: a system of controls and checks instituted by various levels of management that are independent and interdependent and are integrated into the financial and non-financial activities and operations of a business to ensure that the business operations are conducted efficiently and effectively and operating results for all aspects of the business are reliably reported to ensure management decision-making is well based and that all relevant and regulations are complied with (Trenerry, 1999, p. 6).

Management accounting literature shows links between the size of organization and management control systems, also, large diversified firms employing mass production with divisional structure use sophisticated controls and information gathering. Large firms that employ sophisticated technologies use administrative controls like formalized operating procedures, specialists and work rules, on the other hand, small firms have interpersonal controls like centralized decision making, more interaction with budgeting but not accepted methods of reaching their budgets or having to explain budget variances, large firms that are more diverse and decentralized use sophisticated budgets in a participative way and employ more formal methods of communication. Total quality management, Just in Time, Activity based costing and Balanced score card are examples of advanced techniques. Traditional management accounting systems have been criticised for having short-term focus and being internally oriented. Management accounting methods should be tailored to support business strategy to lead to competitive advantage and superior performance, many companies are nowadays emphasizing customer-focused strategies, this strategy exists as a priority in total quality management and balanced score card (Hyvonen, 2008).

2.4 Decision-Making

Decision making process is a judgement process that may a person experiences day by day whenever there are more than one choice to be accepted. It is an integral part of the management process and used continuously in planning and controlling that have been discussed previously.

Making a decision implies that there are alternative choices to be considered, and in such a case the management want not to identify as many of these alternatives as possible but to choose the one that (1) has the highest probability of success or effectiveness and (2) best fits with the organization's goals, desires, values and so on (Harris, 2012)

Even though there is no specific universal viewpoint about techniques of decision making process; it is hoped that this section presents a reasonable overview of this vital managerial process.

2.4.1 Good versus bad decision

First of all, the term decision could be defined as: a moment, in an ongoing process of evaluating alternatives for meeting an objective, at which expectations about a particular course of action impel the decision maker to select that course of action most likely to result in attaining the objective. (Harrison, 1999, p. 5)The question is: what makes the difference between good and bad decisions? The answer could be: a good decision is one that is based on logic, considers all available data and possible alternatives, and applies the quantitative approach. Occasionally, a good decision results in an unexpected or unfavourable outcome. But if it is made properly, it is still a good decision. A bad decision is one that is not based on logic, does not use all available information, does not consider all alternatives, and does not employ appropriate quantitative techniques. If a bad decision was made but lucky and a favourable outcome occurs, it is still a bad decision. Although occasionally good decisions yield bad results, in the long run using decision theory (which is an analytic and systematic way to tackle problems) will result in successful outcomes (Render et al., 2009, p. 70).

However, in the light of the diversity of viewpoints about the goals, models and techniques of decision making; there is an opinion states that: models can be mathematical, social, or philosophical. They can involve physical phenomena, emotional phenomena, or, in fact, anything capable of theoretical analysis (Harrison, 1999).

2.4.2 Categorization of Decision Characteristics

Essentially there are two basic categories classify decisions according to their structure and strategies, category I decisions are: programmable; routine; generic; negotiated; and compromise. On the other hand, category II decisions are: nonprogrammable; unique; judgemental; creative; adaptive; innovative; and inspirational. So that, the differentiating between previous two categories is presenting in the following table:

Table (2- 1): Classify decisions based on their structure & Strategy

	Category I Decision	Category II Decision
Structure	- Procedural - predictable - Certainty regarding - Cause/effect relationships - Recurring -Within existing technologies -Well-defined information channels - Definite decision criteria -Outcome preferences may be certain or uncertain.	- Novel - Unstructured - Consequential - Elusive and complex - Uncertain cause/effect relationships - Nonrecurring - Information channels undefined - Incomplete information - Decision criteria may be unknown - Outcome preferences may be certain or uncertain
Strategy	-Reliance upon rules and principles - Habitual reactions -Prefabricated response - Uniform processing -Computational techniques -Accepted methods for handling	-Reliance on judgement - Intuition and creativity -Individual processing -Heuristic problem-solving techniques -Rules of thumb -General problem-solving processes

Source: Harrison, 1999, p. 21

Clearly, then, the proper concern of top management is category II choices, with category I decisions left to operating management. Middle management should, for the most part, also be concerned with category I choices, although in many situations this level will participate in category II decisions, also.

2.4.3 Types of decision-making environments

The types of decisions people make depend on how much knowledge or information they have about the situation. There are three decision-making environments (Render, 2009, pp. 72-73):

- Decision making under certainty
- Decision making under uncertainty
- Decision making under risk

Type 1: Decision making under certainty

In the environment of decision making under certainty, decision makers know with certainty the consequence of every alternative or decision choice. Naturally, they will choose the alternative that will maximize their well-being or will result in the best outcome.

Type 2: Decision making under uncertainty

In decision making under uncertainty, there are several possible outcomes for each alternative, and the decision maker does not know the probabilities of the various outcomes.

Type 3: Decision making under risk

In decision making under risk, there are several possible outcomes for each alternative, and the decision maker knows the probability of occurrence of each outcome.

Few managers would be fortunate enough to have complete information and knowledge about the states of nature under consideration. Decision making under uncertainty is a more difficult situation. We may find that two different people with different perspectives may appropriately choose two different alternatives.

2.4.4 Decision making models

The eclectic aspects of decision making are best illustrated within the framework of a set of models. Models can be mathematical, social, or philosophical. They can involve physical phenomena, emotional phenomena, or, in fact, anything capable of theoretical analysis. Harrison (1999) points out four models which reflect assumptions and behaviour relevant to decision making in various organizational settings. Noted that, there is virtually no limit to the number of models of decision making that can be developed to serve the purposes and advance the discipline of the model builder.

(1) The rational model (classical)

The primary criterion is maximized outcome. The rational model has its foundation in the quantitative discipline of economics, statistics, and mathematics. It is a normative model that represents the classical approach to decision making.

Common variation of the rational model assumes that:

1. There is only one decision maker.
2. The decision maker has only one objective.
3. The objective can be written in quantitative terms.
4. The potential states of nature and courses of action are finite and have been identified.
5. The decision problem consists simply of choosing the best course of action.

Principal shortcomings of the assumptions underlying the rational model:

1. Objectives are seldom fixed in any organizational setting. Managers must continually modify their objectives to reflect inevitable changes.
2. Managers seldom if ever have unlimited information about a given set of alternatives.
3. Managerial decision makers have cognitive limitations that restrict the amount of information and the number of alternatives they can consider.
4. It is unrealistic to assume that a decision-making situation in formal organizations will not bear time and cost constraints.

(2) The organizational model (neoclassical)

The primary criterion is satisfying outcome. The organizational model (conversely to the rational model), combines the behavioural disciplines with quantitative analysis. Thus the decision maker's choice takes note of constraints caused by the external environment. This model is open to environmental influences and accepts outcomes on their qualitative as well as their quantitative merits.

This model is characterised by:

1. Multiple, changing, acceptable-level goals.
2. An approximate sequential consideration of alternatives. The first satisfactory alternative evoked in the search activity is accepted.
3. The avoidance of uncertainty by following policy and procedures and reacting to feedback rather than attempting to predict consequences.
4. Making and implementing choices within procedures and with the use of rules of thumb derived from experience.

The principal shortcomings of the organizational model are that it has:

1. A short-term horizon.
2. A low tolerance of uncertainty.
3. An all-consuming emphasis on following the established way of doing business.

In these shortcomings the organizational model is similar to the rational model.

The principal difference between the rational model and the organizational model is that the former seeks maximized outcomes, whereas the latter accepts satisfying outcomes.

(3) The political model (adaptive)

The political model is based primarily on the disciplines of political science, philosophy, psychology, and sociology. The political model foundation is almost totally behavioural (not quantitative discipline). Moreover, the political model employs a compromise or bargaining decision-making strategy and aims toward an outcome that is acceptable to many external constituencies. Conversely, the organizational model is, by definition, geared to outcomes that benefit the firm or the institution, at least in the short run. A compromise strategy is the hallmark of political decision making.

The primary requirements of the political model are as follow:

1. Rather than attempting a comprehensive survey and evaluation of all alternatives, managerial decision makers focus only on those policies that differ from existing policies.
2. Only a relatively small number of alternatives are considered.

3. For each alternative, only a restricted number of important consequences are evaluated.
4. The problem confronting the managerial decision makers is continually redefined, so that, the incremental approach (continuous series of adjustments) is more suitable, noted that, the central notion of incrementalism is that choice is marginal.
5. There is no one decision or "right" choice but never-ending series of attacks on the decision at hand.

Based on the last discussion, it seems that the political model is used in formal organizations that depend on external constituencies. Examples are government agencies and other types of public-service institutions. With its patent disregard for the economic aspects of decision making, it is unlikely that the political model will find wide acceptance in the private sector.

(4) The process model (managerial)

Since the making of decisions in the real world is often unstructured a process-oriented approach may seem different from traditional ways of arriving at a choice.

Harrison (1999, p. 37) asserted the definition of decision making as a process consisting of several functions is advantageous for several reasons:

1. It indicates the dynamic nature of decision making
2. It depicts decision-making activities as occurring over varying spans of time
3. It implies that the decision-making process is continuous and, thus, that it is an ever-present reality of organizational life
4. It suggests that managerial decision making can direct and control the nature, degree, and pace of change within the organization.

There are various views according to Harrison (1999) on the process of decision making as follow:

- Finding occasions for making a decision
- Finding possible courses of action
- Choosing among courses of action
- Information gathering

- Development of alternatives
- Evaluation of alternatives
- Choices and action selection
- Problem recognition
- Problem diagnosis
- Recognize, accept and meet the challenge

2.4.5 The functions of decision making

The components of the decision-making process are the functions of decision making, Harrison (1999, p. 38) identifies these functions as follows:

1) Setting managerial objectives. The decision-making process starts with the setting of objectives, and a given cycle within the process culminates upon reaching the objectives that gave rise to it. The next complete cycle begins with the setting of new objectives.
2) Searching for alternatives. In the decision-making process, search involves scanning the internal and external environments of the organization for information. Relevant information is formulated into alternatives that seem likely to fulfil the objectives.
3) Comparing and evaluating alternatives. Alternatives represent various courses of action that singly or in combination may help attain the objectives. By formal and informal means alternatives are compared based on the certainty or uncertainty of cause-and-effect relationships and the preferences of the decision maker for various probabilistic outcomes.
4) The act of choice. Choice is a moment in the ongoing process of decision making when the decision maker chooses a given course of action from among a set of alternatives.
5) Implementing the decision. Implementation causes the chosen course of action to be carried out within the organization. It is that moment in the total decision-making process when the choice is transformed from an abstraction into an operational reality.

6) Follow-up and control. This function is intended to ensure that the implemented decision results in an outcome that is in keeping with the objectives that gave rise to the total cycle of functions within the decision-making process. The six stages previously mentioned are shown in the following figure:

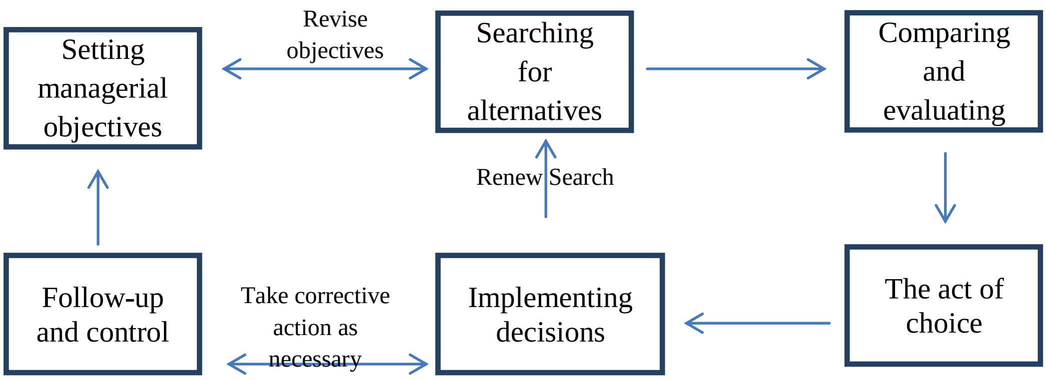

Figure (2-2): The Decision Making Process, (Harrison, 1999, p. 40)

2.4.6 Management accounting for decision-making

A critical managerial function is decision-making. Decisions which management must make may be classified as marketing, production, and financial. Decisions may also be classified as strategic and tactical and long-run and short-run. A primary objective of decision-making is to achieve optimum utilization of the business's capital or resources. Effective decision-making requires relevant information and special analysis of data. The accounting department is a primary source of information necessary in making decisions. In order for the accounting department to make meaningful analysis of data, it is necessary to distinguish between fixed and variable costs and other types of costs that are not important in the recording of business transactions. The accounting department will be expected to provide the information required by a specific tool. In management accounting, decision-making may be simply defined as choosing a course of action from among alternatives, as discussed earlier. If there are no alternatives, then no decision is required. A basis assumption is that the best decision is the one that involves the most revenue or the least amount of cost. The task of management with the help of the management accountant is to find the best alternative, this means that; management accountants are considered business support and internal business consultant they also perform three functions according to (Horngren et al., 2003) :

<u>Scorekeeping</u>: accumulate data and report reliable results to all levels of management.

Attention directing: make visible opportunities and problems on which managers need to focus.

Problem solving: conduct comparative analysis to identify the best alternative in relation to the organization's goals.

Management accounting helps managers to administer each of these business functions:

Research and Development, Production, service process design, marketing, distribution, and customer service. Other vital outcomes of management accounting are: analysis of data, price modeling, profitability analysis, cost benefit analysis, budgeting, planning, management advice, and financial forecasting.

Some of management accounting tools are: comprehensive budgeting, flexible budgeting, capital budgeting, economic order quantity analysis, safety stock/ lead time analysis, activity based costing, balanced scorecard and total quality management that will be discussed in details in the next chapter. For each decision, there exists a management accounting tool that may be used to make a good decision. However, the management accounting tools can be used only if the management accountant is successful in providing the information demanded by the particular tool (Goosen, 2008, pp. 17-23).

Chapter 3: Modern Management Accounting Techniques

3.1 Introduction

There is no doubt that an accounting is the language of business; to understand the financial position of an organization; determining the amount of profit or loss which is the final result of business' operations, and the efficient use of resources.

"Accounting is a language that communicates financial and non-financial information to people who have an interest in an organization – managers, shareholders, potential investors, employees, creditors and the government" (Drury,1997, p.4).

To understand accounting, we must understand the nature (and practice) of measurement and communication, the attributes of (economic) information, the theories and practices of decision-making and we must try to identify the users of accounting information (Arnold & Turley, 1996, p. 5).

The importance of managerial accounting is dramatically increased according to many factors such as globalization, high technology, the importance of quality, and the customer-oriented attitude worldwide.

In every organization; large or small, in all business sectors, management has to plan, organize, direct, motivate, evaluate and control, this is a cycle, through such a cycle; management is executing a decision- making process in daily bases to achieve the organization's mission, which is the reason for its existence.

The role of management accounting is to serve managers inside the organization in forecasting as well as monitoring the current and past performance, measures and reports financial and non-financial information as well as other types of information on the monthly basis or more frequent depending on organization in the relevance for specific management decisions and control system, that are intended primarily to assist managers in fulfilling the goals of the organization.

Because of the intensity of competition and the shorter life cycles of new products and services, management accounting is crucial to an organization's success, in other words, a major purpose of management accounting is to support the achievement of goals.

The Chartered Institute of Management Accountants (CIMA) – the largest association of management accounting in UK –considers management accounting to be an integral part of management. It considers management accounting to require the identification, generation, presentation, interpretation, and use of information relevant to; as (Horngren et al., 2002, p. 6):

- Formulating business strategy
- Planning and controlling activities
- Decision making
- Efficient resource usage
- Performance improvement and value enhancement
- Safeguarding tangible and intangible assets, and
- Corporate governance and internal control

Moreover, the role of management accountants according to Coates et al. (1996, p. 2) is to participate in management to ensure efficiency and effectiveness in:

(a) Formulation of plans to meet objectives (e.g. long term planning)
(b) Formulation of short term operation plans (e.g. budget/ profit planning)
(c) Recording of actual transactions (e.g. financial accounting & cost accounting)
(d) Corrective action to bring future transactions into line (e.g. financial control)
(e) Obtaining and controlling finance (e.g. treasure ship)
(f) Reviewing and reporting on systems and operations (e.g. internal audit/ management audit).

Management in an organization has two essential responsibilities; firstly, *economic function* which responsible of obtaining and distributing limited resources in the way that accomplish its goals. Secondly, *administrative function* which is related to the economic function, and applied through planning, organizing and controlling (Lynch et al., 1984).

Upon the previous arguments, it seems that the managerial accounting focuses on internal reporting, also it could be considered as a future-oriented.

Before discussing the managerial accounting methods in the following sections, there is an importance to accentuate the characteristics of the accounting information to be useful especially in planning, controlling and decision- making process.

Atrill & Mclaney (2005) emphasize that: "For accounting information to be useful, the accountant must be clear about (for whom) the information is being prepared and (for what purpose) the information will be used". (p. 2)

This chapter argues six management accounting methods (mainly modern techniques), these six methods comprise four quantitative management accounting techniques (budgeting, Activity-based costing and just- in- time and financial statement analysis) and one qualitative management accounting technique (Total quality management) and one considered quantitative & qualitative management accounting technique which is the balanced scorecard.

3.2 Characteristics of Accounting Information

The certain key quantities or characteristics that accounting information should possess to be useful and meaningful, has been summarized by (Atrill & Mclaney, 2005. P. 6) as follows:

Relevance: Accounting information must have the ability to influence decisions. Unless this characteristic is present, there is really no point in producing the information. The information may be relevant to the prediction of future events or relevant in helping confirm past events.

Reliability: Accounting should be free from significant errors or bias. It should be capable of being relied upon by users to represent what it is supposed to represent.

Comparability: This quality will enable users to identify changes in the business over time. It will also help users to evaluate the performance of the business in relation to other similar businesses.

Understandability: Accounting reports should be expressed as clearly as possible and should be understood by those at whom the information is aimed.

In addition to the above characteristics, management accountant and top management should take in consideration the (materiality) of information. The constraint of materiality relates to an item's impact on a firm's overall financial operations, an item is material if its inclusion or omission would influence or change the judgment of a reasonable person (Kieso & Weygandt, 1995, p. 49).

Since the accounting (financial or managerial) is an information system; this system will doesn’t work in a good manner to help achieving an organizations' objectives without having common features and attributes.

In the same vein Atrill & Mclaney (2005, p.9) proposed four certain features that are common to all information systems within a business. These are:

- Identifying and capturing relevant information.
- Recording the information collected in a systematic manner.
- Analyzing and interpreting the information collected.
- Reporting the information in a manner that suits the needs of users.

3.3 Budgeting

Budgets are one of the most widely used tools for planning and controlling organizations. Surveys show an almost universal use of budgets by medium or large companies in many parts of the globe. Budgeting systems turn managers' perspectives forward (i.e. future-oriented). A forward-looking perspective enables managers to be in a better position to exploit opportunities. It also enables them to anticipate problems and take steps to eliminate or reduce their severity (Horngren et al., 2002, p. 468).

Even though a budget is a quantitative and financial plan in different organizations, but in the same time it's not unique in all organizations.

A budget as a quantitative and financial plan at the beginning of period (e.g. a fiscal year) is still keeping its role not only as a planning tool but also as a performance evaluation technique and control throughout the operations.

Every organization has its mission, vision, strategy, own plan, management style and objectives to be achieved, Atrill & Mclaney (2005) argued that: "budgeting is a vital process in all businesses as a tool for planning and control, and it is very important to achieve businesses' goals; managers should have a reasonable clear vision about the future". (p. 143)

3.3.1 The concept and definition of budgeting

A budget is a business plan for the short term – typically one year, it is likely to be expressed mainly in financial terms, and it is role is to convert the strategic plans into actionable blueprints for the immediate future (Atrill & Mclaney, 2005, p. 143).

A budget is a quantitative expression of a proposed plan of action by management for a future time period and is an aid to the coordination and implementation of the plan. It can cover both financial and non-financial aspects of these plans and acts as a blueprint for the company to follow in the forthcoming period (Horngren et al., 2002, p. 469).

Atrill & Mclaney (2005) are of the view that the difference between "budgets" as a determination to achieve planned goals, and "forecast" which gives statistical predictions about the future state.

3.3.2 Benefits of Budgets

The following figure shows the planning and control process through budgeting in diagrammatic form:

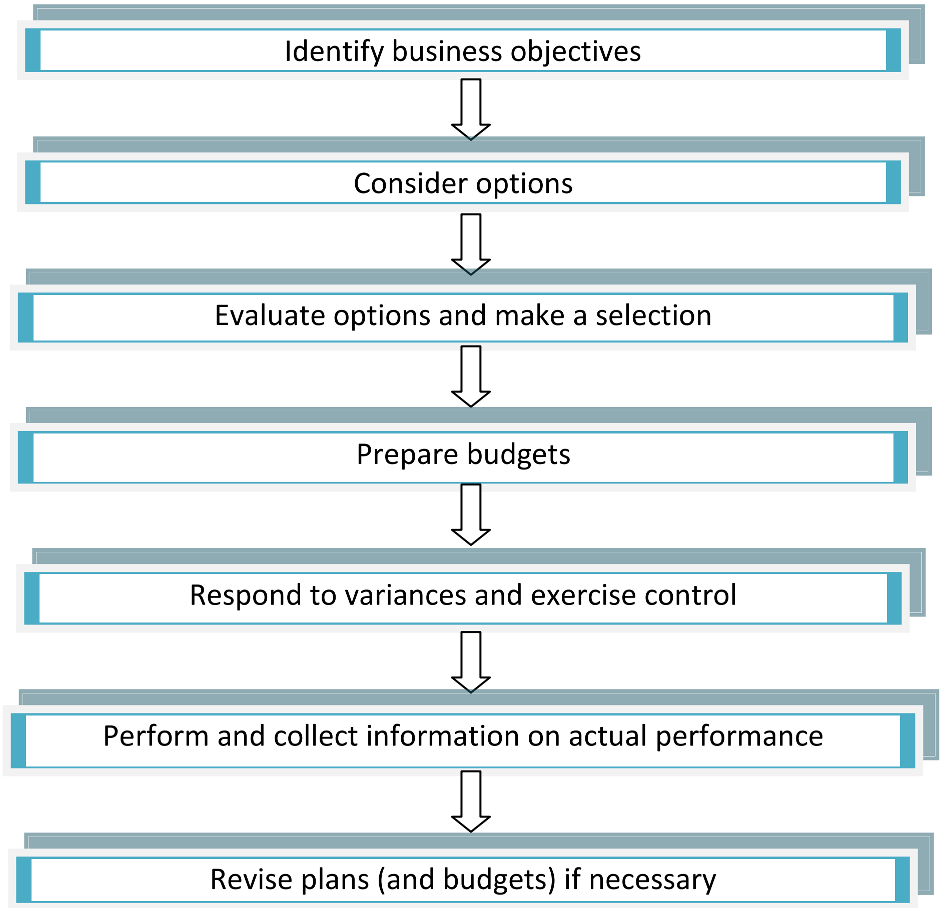

Figure (3-1): The Planning and Controlling Process through Budgeting, (Atrill & Mclaney, 2005, p. 145)

The previous figure shows the planning and control sequence within a business. Once the objectives of the business have been determined, the various options that can fulfill these objectives must be considered and evaluated in order to derive a strategic plan. The budget is a short term financial plan for the business that is prepared within the framework of the strategic plan. Control can be exercised through the comparison of budgeted and actual performance. Where a significant divergence emerges; some form of corrective action should be taken. If the budget figures prove to be based on incorrect assumptions about the future, it might be necessary to revise the budget.

Numerous functions that budgets are trying to fulfill are as follows (Bonavic, 2005, p. 3):

a) Planning – a budget establishes a plan of action that enables management to know in advance the amounts and timing of the production factors required to meet desired levels of sales.
b) Controlling – a budget can be used to help an organization reach its objectives by ensuring that each of the individual steps are taken as planned.
c) Coordinating – a budget is where all the financial components of an organization – individual units, divisions, and departments – are assembled into a coherent master picture that expresses the organization's overall operational objectives and strategic goals.
d) Communicating – by publishing the budget, management explicitly informs its subordinates as to what exactly they must be doing and what other parts of the organization will be doing. A budget is designed to give managers a clear understanding of the company's financial goals, from expected cost savings to targeted revenues.
e) Instructing – a budget is often as much an executive order as an organizational plan since it lays down what must be done. It may, therefore, be regarded by subordinates as a management instruction.
f) Authorizing – if a budget is a management instruction then conversely it is an authorization to take budgeted action.
g) Motivating – in that a budget sets a target for the different members of the organization so that it can act to motivate them to try and attain their budgeted targets.
h) Performance measuring – by providing a benchmark against which actual performance can be measured, a budget clearly plays a crucial role in the important task of performance measurement.
i) Decision-making – it should never be assumed that a budget is set in concrete and when changing course a well-designed budget is a very useful tool in evaluating the consequences of a proposed alternative since the effect of any change can be traced throughout the entire organization.
j) Delegating – budgets delegate responsibility to the managers who assume authority for a specified set of resources and activities. In this way budgets emphasis even more the existing organizational structure within the company.
k) Educating – the educating effect of a budget is perhaps most evident when the process is introduced in a company. Operating managers learn not only the

technical aspects of budgeting but also how the company functions and how their business units interact with others.

l) Better management of subordinates – a budget enhances the skills of operating managers not only by educating them about how the company functions, but also by giving them the opportunity to manage their subordinates in a more professional manner.

3.3.3 Choosing a budget period

The purpose for budgeting is related directly to the time period determined to be managed on the short-run or long-run.

According to Garrison et al. (2008): "Operating budgets ordinarily cover a one-year period corresponding to the company's fiscal year". However, continuous or perpetual budgets are used by a significant number of organizations. A continuous or perpetual budget (also called a rolling budget) is a 12-month budget that rolls forward one month (or quarter) as the current month (or quarter) is completed. This approach keeps managers focused on the future at least one year ahead". (P. 373)

Companies frequently use rolling budgets when developing five-year budgets for long-run planning (Horngren et al., 2002, p. 475).

3.3.4 Human factors in budgeting

The success of a budget program also depends on two human factors as Garrison et al. (2008, p. 375) state:

1. The degree to which top management accepts the budget program as a vital part of the company's activities.
2. The way in which top management uses budgeted data.

3.3.5 The budget committee

A standing budget committee is usually responsible for overall policy relating to the budget program and for coordinating the preparation of the budget itself. This committee may consist of the president; vice president in charge of various functions such as sales, production, and purchasing; and the controller. Difficulties and disputes relating to the budget are resolved by the budget committee. In addition, the budget committee approves the final budget and receives periodic reports on the progress of the organization in attaining budgeted goals (Garrison et al., 2008, p. 377).

3.3.6 Types of budgets

1) Operating budgets

Operating budget is the budgeted profit statement and with its supporting budget schedules, for example, revenue budget, production budget, direct materials costs budget, cost of goods sold budget, marketing costs budget and customer-service costs budget. (Horngren et al., 2002, p. 477)

Operating budgets consist of plans for all those activities that make up the normal operations of the firm. The main components of the firm's operating budget include sales, production, inventory, materials, labor, overheads and R&D budgets (Banovic, 2005, p. 11).

2) Financial budgets

The financial budget as Horngren et al. (2002) argued is: "that part of the master budget that comprises the capital budget, cash budget, budgeted balance sheet, and budgeted statement of cash flows. It focuses on the impact of operations and planned capital outlays on cash". (p. 477)

Financial budgets are used to control the financial aspects of the business. In effect, these budgets reveal the influence of the operating budgets on the firm's financial position and earnings potential. They include a cash budget, capital expenditure budget and pro forma balance sheet and income statement (Banovic, 2005, p. 11).

It is important to note that, typical capital budgeting decisions could be related to the following issues:

- Business expansion
- Equipment selection
- Equipment replacement
- Lease or buy decisions
- Cost reduction

3) Master budget

In an organization according to (Garrison et al., 2008) the term master budget refers to a summary of a company's plans including specific targets for sales, production, and financing activities. The master budget- which culminates in a cash budget, a budget income statement, and a budgeted balance sheet- formally lays out the financial aspects of management's plans for the future and assists in monitoring actual expenditures relative to those plans.

The master budget consists of a number of separate but interdependent budgets. The following list of documents would be a part of the master budget:

1. A sales budget, including a schedule of expected cash collections.
2. A production budget (a merchandise purchases budget would be used in a merchandising company)
3. A direct materials budget, including a schedule of expected cash disbursement for raw materials.
4. A direct labor budget.
5. A manufacturing overhead budget.
6. An ending finished goods inventory budget.
7. A selling and administrative expense budget.
8. A cash budget.
9. A budgeted income statement.
10. A budgeted balance sheet.

4) Static budget

A (static budget) is prepared at the beginning of the budgeting period and is valid for only the planned level of activity, but the main disadvantage of the static budget is that, this approach is suitable for planning, but it is inadequate for evaluating how well costs are controlled. If the actual level of activity during a period differs from what was planned, it would be misleading to simply compare actual costs to the static budget. If activity is higher than expected, variable costs should be higher than expected; and if activity is lower than expected; variable costs should be lower than expected (Garrison et al., 2008, p. 475).

5) Flexible budget

Flexible budgets take into account how changes in activity affect costs. A (flexible budget) makes it easy to estimate what costs should be for any level of activity within a specified range. When a flexible budget is used in performance evaluation, actual costs are compared to what the "costs should have been for the actual level of activity during the period" rather than to the budgeted costs from the original budget. This is a very important distinction- particularly for variable costs. If adjustments for the level of activity are not made, it is very difficult to interpret discrepancies between budgeted and actual costs (Garrison et al., 2008, p. 476).

In the same vein, it should be asserted the following notion, to (flex) the budget we need to know that:

- ❖ Total variable costs change in direct proportion to changes in activity.
- ❖ Total fixed costs remain unchanged within the relevant range.

6) Activity-based budget

Under activity-based budget (ABB), the first step is to specify the products or services to be produced and the customers to be served. Then the activities that are necessary to produce these products and services are determined. Finally, the resources necessary to perform the specified activities are quantified. Conceptually, ABB takes the ABC model (that will be discussed later on) and reverses the flow of the analysis (Hilton, 2001, p. 375).

Horngren et al. (2002) argue that: "Activity-based costing principles can also be extended in the budgeting of future costs. Activity-based budgeting focuses on the cost of activities necessary to produce and sell products and services. It separates indirect costs into separate homogeneous activity cost pools. Management uses the cause-and-effect criterion to identify the cost drivers for each of these indirect-cost pools". (p. 486)

Last authors point out the practical aspect of implementing ABB through four concise steps as follows:

(1) Determine the budgeted costs of performing each unit of activity at each activity area.

(2) Determine the demand for each individual activity based on budgeted production, new product development and so on.

(3) Calculate the costs of performing each activity.

(4) Describe the budget as costs of performing various activities.

Activity based budgeting stands in contrast to traditional, cost-based budgeting practices in which a prior period's budget is simply adjusted to account for inflation or revenue growth. As such, ABB provides opportunities to align activities, streamline costs and improve business practices. Under ABB, companies will be able to focus on the activities that are considered to be profitable and phase out those that do not generate as much profit.

7) Incremental budget VS. Zero-based budget

(Incremental) and (Zero-based) budgeting, the two different kinds of budgets based on two different methods. One method is to take the current level of operating activities and the current budgeted allowances for existing activities as the starting point for preparing the next annual budget, this approach determine the next annual budget amounts which is the current one plus a percent (in increase) may imposed by management to meet next period requirements, also to cover higher prices caused by inflation. On the other hand, there is a zero-based budget approach also known as priority-based budgeting, this kind of budgets make managers need to be convinced of the rational and priority of each activity before giving the green light to include it in the next annual budget, as a result of the scarcity of resources. But, the major problem with zero-base budgeting is that it is very time-consuming. However, it does not have to be applied throughout the organization. It can be applied selectively to those areas about which management is most concerned and used as a one-off cost reduction program (Drury, 1997, p. 210-212).

The benefits of zero-base budgeting over traditional methods of budgeting according to Drury (1997) are summarized as follows:

(1) Traditional budgeting tends to extrapolate the past by adding a percentage increase to current year cost. This becomes very much a preservation of the status quo, since the relationship between costs and benefits for a particular activity is rarely questioned and consequently costs are not necessarily allocated to use where they are most required. Zero-base budgeting represents a move towards allocation of resources by need and benefit.

(2) Zero-base budgeting creates a questioning attitude rather than one that assumes that current practice represents value for money.

(3) Zero-base budgeting focuses attention on outputs in relation to value for money.

(4) Zero-base budgeting leads to increased staff involvement, which may lead to improved motivation and greater interest in the job.

Zero-base budgeting involves the following three stages:

1. A description of each organizational activity in a decision package.
2. The packages are then evaluated and ranked in order of priority.
3. The resources are allocated accordingly.

3.4 Activity-Based Costing

In the late 1980s considerable amount publicity was given to product costing and profitability analysis. In a series of articles Cooper and Kaplan drew attention to the limitations of traditional product costing systems. Their criticisms relate to the methods of allocating overheads to products (Drury, 1997, p. 104).

Of course there are many factors in the business especially in the industrial world that contributed to alter from traditional costing to activity-based costing (ABC), this method assigns costs to products or services based on the resources that they consume.

Having accurate costs is important for a variety of reasons: a company might find that it has a difficult time determining which of its products is most profitable. Alternatively, it finds its sales increasing but profits declining and can't understand why. Perhaps the company keeps losing competitive bids for products and services and does not understand why. In many cases, accurate cost information is the answer to these questions. Accurate cost information provides a competitive advantage. It helps a company or organization to develop and to execute its strategy by providing accurate information about the cost of its products and services, the cost of serving its customers, the cost of dealing with its suppliers, and the cost of supporting business processes within the company (Blocher, 2008, p. 120).

3.4.1 Definition of Activity-based costing

Garrison et al. (2008, p. 310) define ABC system as a costing method that is designed to provide managers with cost information for strategic and other decisions that potentially affect capacity and therefore "fixed" as well as variable costs.

Blocher (2008, p. 122) points out that ABC is a costing approach that assigns resource costs to cost objects such as products, services, or customers based on activities performed for the cost objects. The premise of this costing approach is that a firm's products or services are the results of activities and activities use resources which incur costs. Costs of resources are assigns to activities based on the activities that use or consume resources, and costs of activities are assigned to cost objects based on activities performed for the cost objects. ABC recognizes the casual or direct relationships between resource costs, cost drivers, activities, and cost objects in assigning costs to activities and then to cost objects.

Activity cost pool could be considered as: a 'bucket' in which costs are accumulated that relate to a single activity measure in the ABC system. (Garrison et al., 2008, p.312). A resource is an economic element needed or consumed in performing activities. Salaries and supplies, for example, are resources needed or used in performing manufacturing activities (Blocher, 2008, p. 122).

The key word in ABC approach is *cost driver*. "With the ABC system costs are traced to products according to the product's demands for activities". (Drury, 1997, p. 106). *Cost driver* is a factor that causes, or "drives" an activity's costs (Maher & Deakin, 1994, p. 248).

3.4.2 ABC characteristics

Atrill & Mclaney (2005, p. 110) point out some characteristics of ABC approach that it could be considered as:

- Capital-intensive and machine-paced production. NOT, direct-labor-intensive and direct-labor-paced production.
- A high level of overheads relative to direct costs. NOT, a low level of overheads relative to direct costs.
- A highly competitive international market. NOT, a relatively uncompetitive market.

According to traditional cost accounting; just manufacturing costs are included in the product's cost, on the other hand; manufacturing and non-manufacturing costs (e.g. selling and administrative costs) all of them are assigned aptly to products (Garrison et al. , 2008)

Another big difference between traditional costing approach and ABC is that "volume-related measures". Drury (1997) discussed the notion of volume-related measures (e.g. labor hours and machine hours) which is accurately measure resources that are consumed in proportion to the number of units produced of the individual products. He goes further to state that: "traditional product cost systems, which assume that products consume (all) resources in proportion to their production volumes, thus report distorted product costs.

Atrill & Mclaney (2005, p. 112) argue that: "realization that overheads do not just occur, but that they are caused by activities that 'drive' the costs, is at the heart of activity-based costing".

ABC system can be used to identify and eliminate activities that add costs but not value to the product. Non-value added costs are costs of activities that could be eliminated without reducing product quality, performance or value (Maher & Deakin, 1994, p. 260).

3.4.3 Implementation of ABC system

Introducing ABC is not a simple task- it is by no means as easy as ABC. For a start, all business activities must be broken down into their discrete components. (Hindle, 2009). ABC system simply recognizes that businesses must understand the factors that drive each major activity, the cost of activities and how activities relate to products. The design of ABC systems involves the following stages as Drury (1997, p. 107):

1. Identifying the major activities that take place in an organization.
2. Creating a cost pool/ cost center for each activity.
3. Determining the cost driver for each major activity.
4. Assigning the cost of activities to products according to the product's demand for activities.

General structure of the ABC model could be presented as follows:

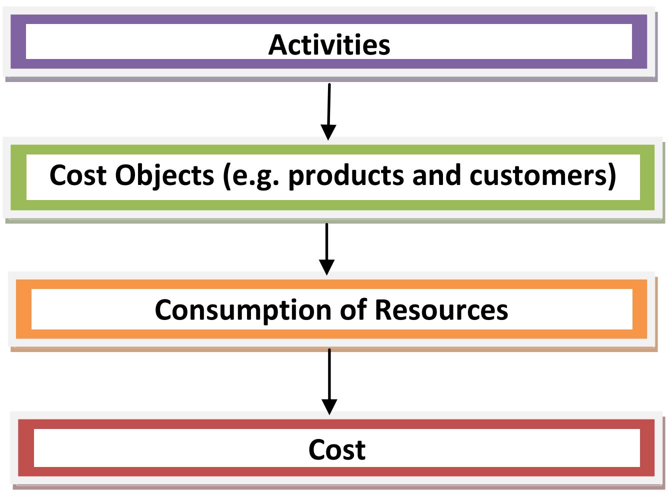

Figure (3-2): General Structure of the ABC Model (Garrison et al., 2008, p. 315)

In this vein, Activity-based costing researcher Robin Cooper, whose work was manufacturing based, documented four types of activities that have different drivers, their costs should not be combined as if there is only one driver. (Vercio & Shoemaker, 2007):

1. Unit activities occur every time a unit is processed. Examples include grinding, finishing, assembly and painting.
2. Batch activities occur every time a batch – lot size of one or greater- enters and exits a work station. These will include operational and conditional setups. As a general rule, conditional setup activities are not related to the volume of the units in the batch.
3. Product activities include all the activities to ensure that production- manufacturing or service- has the capability to produce the product. These activities include maintenance of routings, recipes, test programs and software, as well as product-specific training. These activities do not vary with the number of units or the number of batches.
4. Facility activities include the plant manager, security and ground management. They are usually less than 10% of the total cost.

The higher the certainty about the accuracy of the costing system in measuring the overhead; the higher ability the organization achieved to get a competitive capability in the market through better pricing capability, cost reduction and continuous improvement.

Large companies should try a pilot scheme before implementing ABC system. The information essential for ABC may not be readily available and may have to be calculated specially for the purpose. This involves making many new measurements. Large companies often hire consultants who are specialists in the area to help them get a system up and running (Hindle, 2009).

3.4.4 ABC advantage and benefits

There are many advantages and benefits of ABC systems, some of these advantages are given here (Activity Based Costing, 2012):

1) Better profitability measures. ABC provides more accurate and informative product costs, leading to more accurate product and customer profitability measurements and to better-informed strategic decisions about pricing, product lines, and market segments.

2) Better decision making. ABC provides more accurate measurements of activity-driving costs, helping managers to improve product and process value by making better product design decisions, better customer support decisions, and fostering value enhancement projects.
3) Process improvement. ABC provides the information to identify areas where process improvement is needed. A good ABC system can be helpful to find and focus on non valued added activities and can guide in better allocation of business resources to more efficient and profitable activities of any business process.
4) Cost estimation. Improved product costs lead to better estimates of job costs for pricing decisions, budgeting, and planning.
5) Identifies wasteful products. ABC method identifies costs similar to the way production work is performed. ABC system can help to an organization in better understanding of overhead costs are going. The ABC reports can identify wasteful products and non value added costs, so that resources can be used more efficiently.

3.4.5 ABC limitations and critics

Analysis of overheads in order to identify cost drivers is time consuming and costly, and that the benefit of doing so, in terms of more accurate costing and the potential for cost control, does not justify the cost of carrying out the analysis. (Atrill & Mclaney, 2005)

In addition, Garrison et al. (2008) identified the following limitations of ABC system:

- Substantial resources required to implement and maintain.
- Desire to fully allocate all costs to products.
- Resistance to unfamiliar numbers and reports.
- Potential misinterpretation of unfamiliar numbers.
- Does not conform to GAAP, two costing systems may be needed.

3.5 Just-in-time

This is one of modern systems implemented by modern organizations worldwide to manage costs under a variety of challenges and limitations.

Just-in-time (JIT) refers to a system in which materials arrive exactly as they are needed. Demand drives the procurement or production of any needed materials and immediate delivery eliminates waiting times and the need for stock. Managers in such companies as Renault in France, AT&T in the USA, Honda Motors in Japan, Siemens in Germany, Cummins Engineers in the UK and DAF Trucks in Holland, which have implemented just-in-time systems, believe stock is waste that can be minimized and even eliminated through careful planning (Horngren et al., 2002, p. 706).

3.5.1 The concept of just-in-time

It seems that 'time' is the key issue in this costing system. JIT refers to a system in which materials arrive exactly as they are needed (Horngren et al., 2002, p. 706).

The production is not initiated until a customer has ordered a product. Inventories are reduced to a minimum by purchasing raw materials and producing units only as needed to meet customer demand. Under ideal conditions, a company operating a pull system (not push one) would purchase only enough materials each day to meet that day's needs. Moreover, the company would have no goods still in process at the end of the day, and all goods completed during the day would be shipped immediately to customers. As this sequence suggests, work takes place "just-in-time" in the sense that raw materials are received by each manufacturing cell just in time to go into production, manufactured parts are completed just in time to be assembled into products, and products are completed just in time to be shipped to customers (Garrison, 2008, p. 14).

JIT systems produce with perfect quality, with minimum lead time and produce products or render services with only those features the customer wants.

3.5.2 Features of JIT system

There are five main features in a JIT production system according to Horngren et al. (2002, p. 706-707):

1) Production is organized in manufacturing cells, a grouping of all the different types of equipment used to manufacture a given product.
2) Workers are trained to be multi-skilled so that they are capable of performing a variety of operations and tasks.
3) Total quality management is aggressively pursued to eliminate defects.
4) Emphasis is placed on reducing set-up time, which is the time required to get equipment, tools and materials ready to start the production of a component or product, and manufacturing lead time, which is the time from when an order is ready to start on the production line to when it becomes a finished good.
5) Suppliers are carefully selected to obtain delivery of quality-tested parts in a timely manner.

3.5.3 Financial benefits of JIT

JIT tends to focus broadly on the control of total manufacturing costs instead of individual costs such as direct manufacturing labor; JIT can provide many financial benefits. Horngren et al. (2002, pp. 709-710) summarize these benefits as follows:

- Lower investment in stocks
- Reductions in carrying and handling costs of stocks
- Reductions in risk of obsolescence of stocks
- Lower investment in plant space for stocks and production
- Reductions in set-up costs and total manufacturing costs
- Reduction in costs in waste and spoilage as a result of improved quality
- Higher revenues as a result of responding faster to customers
- Reduction in paperwork.

A study of companies that adopted JIT in comparison to a control group that did not adopt JIT, found that the JIT adopters improved their return on investments ROIs more. (ROI) calculated as the following equation:

$$\boxed{ROI = \frac{Net\ operating\ income}{Sales\ average} \times \frac{Sales}{operating\ assets}}$$

The JIT adopters' success resulted from improvements in both profit margins and asset turnover. The elimination of inventories in JIT reduces total assets, but more important, it leads to process improvements as production problems are exposed. When production problems and non-value-added activities are eliminated, costs go down (Garrison et al., 2008, p. 535).

3.5.4 JIT in service sector

As JIT has won the hearts and minds of manufacturing practitioners, advocates suggest service operators will also benefit from JIT. It is believed that JIT is applicable to the service sector as both manufacturing and service firms employ process to create their final products and services. Recent improvements in information technology have also enhanced the ability of services to benefit from JIT systems. For example, bar-code technology made it possible to create a JIT replenishment system between suppliers and retailers, also the automated teller machine (ATM) has also had a huge impact on improving and expanding banking services and customer services and customer satisfaction. JIT can be seen as a new way of thinking, planning and performing with respect to logistics. JIT logistics consists of several components or elements that must be integrated together to function in harmony to achieve the JIT goals, these elements essentially include human resources, the logistics networks and the production, distribution, marketing and accounting functions of a firm (Lai & Cheng, 2009).

3.6 Total Quality Management

Total Quality Management (TQM) is a way of life, it could be considered a practical philosophy for everyone or organization tends to continuous improvement and concentrates on high quality in tools and targets.

TQM is both a philosophy and a set of guidelines that form the basis for continuous and gradual quality improvement of the total organization, whereby planning of improvement activities, implementation of these plans, checking and undertaking actions, is continuously taking place (Rampersad, 2010).

TQM considered one of 'qualitative' management accounting techniques, which covers the organization as a whole. Organizations in our rapidly changeable environment can only survive and rival by continuous quality improvement.

But, what is the meaning of the word (quality)? Which is considered the axis of the TQM method?

The word quality has many meanings according to Hoyle (2007, p. 10):

- A degree of excellence.
- Conformance with requirements.
- The totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs.
- Fitness for use.
- Fitness for purpose.
- Freedom from defects, imperfections or contamination.
- Delighting customers.

As Hilton (2001, p. 539) states: "TQM is the broad set of management processes designed to focus an entire organization and all of its employees on providing products or services that do the best possible job of satisfying the customer".

3.6.1 TQM-features

TQM is a continuous learning process which never stops. It is a cyclic, iterative, and never-ending activity. Further and more focused definition stated that: TQM is a disciplined method of defining a problem, observing it, determining its root causes, taking action, checking the effectiveness of that action, standardizing the solution, and evaluating the process. It could be seen as being concerned with the following (Rampersad, 2010, p. 4):

- Meeting the needs and expectations of customers;
- Covering all parts of the organization;
- Examining all costs which are related to quality;
- Doing things right the first time, i.e. quality designing rather than inspecting;
- Developing the systems and procedures which support quality and improvement;
- Developing a continuous process of improvement.

Therefore, this approach works equally well in manufacturing firms and in service organizations.

3.6.2 Deming-wheel

"Deming-wheel", relative to American (Prof.) W. Edwards Deming, is the central and necessary for effective quality improvement, as the following figure shows:

'Deming-wheel' cycle consists of four phases: Plan, Do, Check and Act.

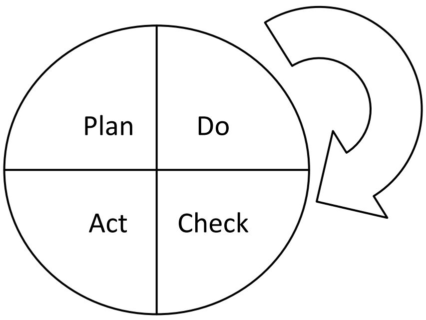

Figure (3-3): Deming-wheel, (Rampersad, 2010, p. 6)

Plan: Define the problem, analyze the causes and draft an action plan for solving the problem, determine the quality objectives and the critical success factors, define the performance indicators, collect and analyze the necessary process data, generate possible solutions, select the most feasible solution, and work it out.

Do**:** First, implement the plan on a limited scale or conduct an experiment to test the proposed improvement. Collecting data is hereby essential. Train all involved employees in the use of quality improvement methods and techniques. Describe the process which is considered for improvement and form project teams to lead the process.

Check: Evaluate the trial project with the performance indicators. Verify whether the improvement has been successful. What have we learned?

Act: Act to implement proven improvements. The choices are: introduce the plan, adjust or reject it. The improvements are documented in standard procedures so all employees involved are well-informed on how to handle in future. Usually, the cycle will be repeated under the different circumstances and conditions to test how consistent the results are.

3.6.3 TQM-house

TQM is a common method to improve the whole organization stepwise, structured and systematically according to hard work, discipline, intensive training, and consistent implementation of techniques and resources. These quality principles form the foundation of TQM and are expressed in the four pillars of the TQM-house, see next figure (3.4) (Rampersad, 2010, p. 8)

1. Problem Solving Discipline;
2. Interpersonal skills;
3. Teamwork;
4. Quality Improvement Process.

The success of TQM improves proportionally in conjunction with the percentage of employees within the organization who master this quality attitude, mentality, and skills.

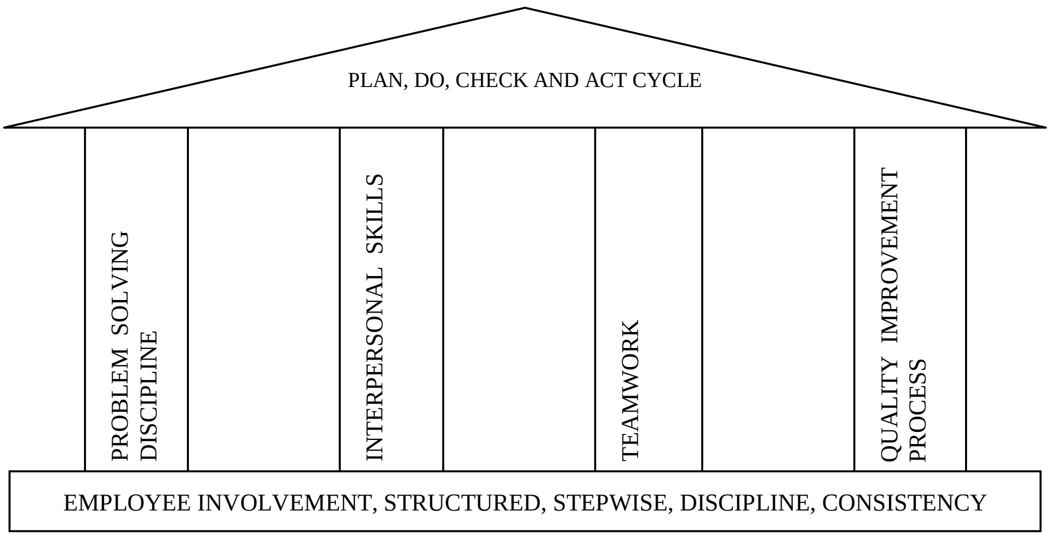

Figure (3-4): TQM-House, (Rampersad, 2010, p. 8)

TQM covers all parts of the organization, for an organization to be truly effective, every single part of it, each department, each activity, each person and each level must work properly together, because every person and every activity affects and in turn is affected by others (Rampersad, 2010).

The problem solving discipline includes:

1. Defining the problem
2. Analyzing the causes
3. Generating solutions
4. Planning and implementing the solution
5. Measuring to determine if the solution really works
6. Standardization of the improvements

Interpersonal skills include:

1. Listening
2. Questioning
3. Building up on ideas of others
4. Constructive arguing
5. Clarifying
6. Summarizing
7. Involving others
8. Showing appreciation
9. Giving feedback

Teamwork includes:

1. Team composition
2. Team performance and team development
3. Conducting effective meetings
4. The role of the team members
5. The role of the leader

The quality improvement process includes:

1. Process selection
2. Process evaluation

3. Process standardization
4. Process improvement

3.6.4 Standard quality system ISO 9000

The application of TQM in organizations, indeed, requires standard quality systems such as ISO 9000-9003, these standard quality systems acts as lever in the endless way to implement total quality.

The key to receiving certification under the ISO 9000 standards is documentation", they add: "this documentation must be so detailed and precise that if all the employees in a company were suddenly replaced; the new employees could use the documentation to make the product exactly as it was made by the old employees, the International Organization for Standardization (ISO) has established over 15000 standards during its existence. As of 2003, more than 600000 companies worldwide had received some form of ISO certification (Garrison et al., 2008).

According to Magd (2010) study; table (3.1) shows the comparative analysis between the problems of ISO 9001:2000 in Egypt, Turkey and Sweden as follows:

Table (3-1): Comparative analysis between the problems of ISO in three countries

Rank	Egypt (Magd study, 2010)	Turkey (Erel and Ghosh, 1997)	Sweden (Carlsson and Carlsson, 1996)
1	The need to change the regular system to fit ISO	Time and resources Consuming	Lack of understanding of its importance by all departments
2	A resistance to the introduction of ISO	Difficulties in interpreting the standards	Unwillingness to change from the existing system
3	Lack of understanding of the importance of ISO by all departments	Cumbersome and bureaucratic documentation	Difficulty in understanding the ISO requirements
4	ISO implementation is time consuming	Initial difficulties in making the quality system understood	Documentation control
5	ISO implementation involves high costs	Difficulties in choosing the suitable level of documentation	Time and cost

Source: Magd, 2010, p. 65

3.7 Balanced Scorecards

The Balanced Scorecard (BSC) is a strategic performance management framework that has been designed to help an organization monitor its performance and manage the execution of its strategy. In its simplest form the BSC breaks performance monitoring into four interconnected perspectives: Financial, Customer, Internal Processes and Learning & Growth as indicated in the next figure (3-5) (Marr, n.d.)

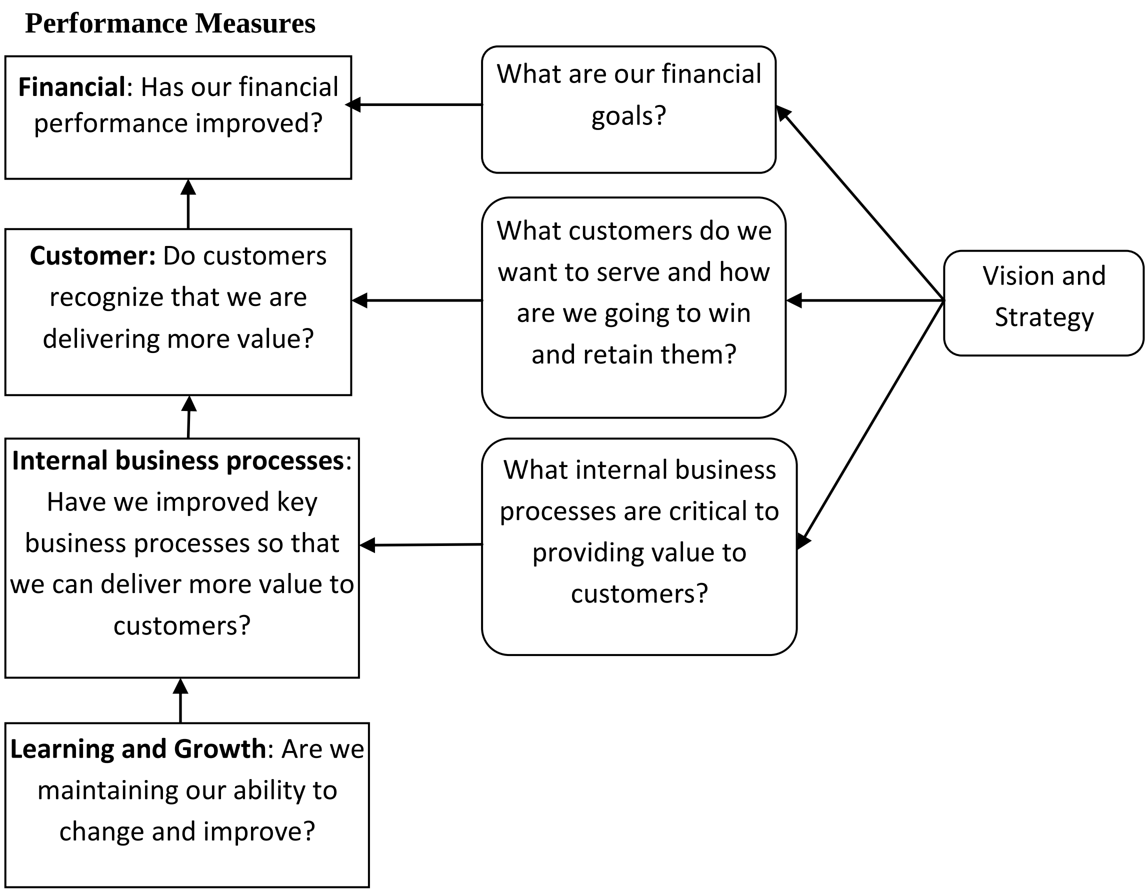

Figure (3-5): The Balanced Scorecard, from Strategy to Performance Measures (Garrison et al., 2008)

These perspectives form the balance in the scorecard, but it is not required that all four be represented. Nonprofits and mission-based organizations tend to include mission as the fifth perspective as an example (Nair, 2004, p. 57).

The BSC retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investment in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation (Kaplan & Norton, 1996, p. 7).

3.7.1 Characteristics of BSC

Nair (2004, p. 13) points out that as the name implies; BSC is a methodology to solve challenges in balancing the theories of a strategy with its execution. It has the following characteristics:

- Its methodology is suited for managing business strategy.
- It uses a common language at all levels of the organizations.
- Is uses a common set of principles to manage day-to-day operations as well as to framework the company's strategy.
- It is designed to identify and manage business purposes.
- It provides a balance between certain relatively opposing forces in strategy:
  - Internal and external influences.
  - Leading and lagging indicators and measures.
  - Financial and non-financial goals.
  - Organizational silos focused on their own goals and an overarching framework of goals.
  - Finance priorities and operations.
- It aligns strategic goals with objectives, targets, and metrics.

3.7.2 The benefits of BSC

The key benefits of using BSC according to Kaplan and Norton (1996) are:

- The BSC provides managers with the instrumentation they need to navigate to future competitive success.
- The BSC translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system.
- Clarify and gain consensus about strategy.
- Link strategic objectives to long-term targets and annual budgets.
- Perform periodic and systematic strategy reviews.

- The BSC enables companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they need for future growth.
- Communicate strategy throughout the organization.
- Obtain feedback to learn about and improve strategy.

3.7.3 The process of building BSC

While there are many ways to develop a balanced scorecard, Kaplan and Norton defined a four-step process that has been used across a wide range of organizations (www.netmba.com):

1. Define the measurement architecture – when a company initially introduces the balanced scorecard, it is more manageable to apply it on the strategic business unit level rather than the corporate level. However, interactions must be considered in order to avoid optimizing the results of one business unit at the expense of others.
2. Specify strategic objectives – the top three or four objectives for each perspective are agreed upon. Potential measures are identified for each objective.
3. Choose strategic measures – measures that are closely related to the actual performance drivers are selected for evaluating the progress made toward achieving the objectives.
4. Develop the implementation plan – target values are assigned to the measures. An information system is developed to link the top level metrics to lower-level operational measures. The scorecard is integrated into the management system.

3.7.4 Potential pitfalls

The following are potential pitfalls that should be avoided when implementing BSC according to Horngren et al. (2002) and others:

1. Do not assume the cause-and-effect linkages to be precise. They are merely hypothesis. A critical challenge is to identify the strength and speed of the casual linkages among the non-financial and financial measures.

2. Do not seek improvements across all of the measures all of the time. This approach may be inappropriate because trade-offs may need to be made across various strategic goals.
3. Lack of a well-defined strategy, BSC relies on a well-defined strategy and an understanding of the linkages between strategic objectives and the metrics. Without this foundation, the implementation of BSC is unlikely to be successful. www.netmba.com
4. Do not use only objective measures (e.g. operating income and market share) but also subjective measures (e.g. customer and employee satisfaction)
5. Do not fail to consider both costs and benefits of initiatives such as spending on information technology and R&D before including these objectives in the BSC.
6. Not making the BSC a critical part of the management process. Organizations who have taken BSC to success have one thing in common- they made the methods a part of everyone's day-to-day functions. (Nair, 2004)

3.7.5 Upgrading management accounting by using BSC

Shah et al.(2011) argued that while the traditional management accounting failed to make use of strategic thinking and other qualitative aspects of management the new disciplines is likely to make accounting more relevant and important for managers. This new discipline is strategic management accounting (SMA) which is differentiated from management accounting (MA) on the basis of its greater focus on the comparison of the business with its competitors; their procedures and new techniques to take strategic decisions by using accounting, then cutting costs on the basis of strategic decisions in order to gain a competitive advantage. Analysts view with great favor that SMA focuses on financial information of a business' product markets and competitors' cost structures and the monitoring of the enterprise's strategies and those of its competitors in these markets over a number of periods. This leads to a greater emphasis on the information related to the external factors of the business including internally generated and non-financial information. Another promising feature of SMA is that performance measurement is not based on profit related measures but strategic tools such as BSC are utilized for strategic performance management purpose.

3.8 Financial Statement Analysis

Financial statements are historical documents. They summarize what has happened during a particular period. However, most users of financial statements are concerned with what will happen in the future. For example, stockholders are concerned with future earnings and dividends and creditors are concerned with the company's future ability to repay its debts. While financial statements are historical in nature, they can still provide users with valuable insights. These users rely on financial statement analysis FSA, which involves examining trends in key financial data, comparing financial data across companies, and analyzing financial ratios to assess the financial health and future prospects of a company (Garrison et al., 2008, p. 717).

Financial statements are prepared to meet external reporting obligations and also for decision making purposes, they play a dominant role in setting the framework of managerial decisions. Financial statement analysis helps business to determine and analyze the main two survival factors for any business which are profitability and solvency.

3.8.1 Limitations of financial statements analysis

Although financial statements analysis is a very usefulness in the business planning, controlling and decision making, there are some limitations should be considered according to Garrison et al. (2008):

1) Comparison of financial data.

Differences in accounting methods between companies sometimes make it difficult to compare their financial data; this is probably the greatest criticism of ratio analysis. For example, if one company values its inventory using the LIFO method, and another uses the average cost method, or the differentiation in the depreciation methods, then direct comparisons of financial data such as inventory valuations and cost of goods sold may be misleading.

2) The need to look beyond ratios.

Ratios should not be viewed as an end, but rather as a starting point. Analysts should look to other sources of data such as:

- Technological changes
- Industry trend
- Changes within the company
- Consumer tastes
- Economic factors

3) Many large firms operate different divisions in different industries, and for such companies it is difficult to develop a meaningful set of industry averages. Therefore, ratio analysis is more useful for small, narrowly focused firms than for large, multidivisional ones (Brigham & Ehrhardt, 2008, p. 143).
4) A firm may have some ratios that look "good" and others that look "bad", making it difficult to tell whether the company overall is strong or weak. However, statistical procedures can be used to analyze the net effect of a set of ratios (Brigham & Ehrhardt, 2008, p. 144).

3.8.2 Purpose of financial statement analysis

According to Low (2011) the purpose of financial statement analysis could be summarized in the following points:

- To use financial statements to evaluate an organization's financial performance (e.g. sales is the base) and financial position (e.g. total assets is the base)
- To have a measure of comparative analysis across time in terms of:
  Intra-company bases (within the company itself)
  Intercompany basis (between companies)
  Industry average (against that particular industry's averages)
- To apply analytical tools and techniques to financial statements to obtain useful information to aid decision making
- Provide information about the organization's past performance, present condition and future performance

In this vein, we have to note that, if one knows only how to calculate ratios and trend without understanding how such information can be used, little is accomplished.

3.8.3 Tools of financial statement analysis

The commonly tools of financial statement analysis are horizontal analysis, vertical analysis, and ratios analysis.

(1) Horizontal analysis

Horizontal analysis or (trend analysis) shows the changes between years in the financial data in both dollar and percentage form. Quantifying dollar changes overtime serves to highlight the changes that are the most important economically, also quantifying percentage changes overtime serves to highlight the changes that are the most unusual.

Horizontal analysis can be even more useful when data from a number of years are used to compute trend percentages as the following ratio:

Trend Percentage = Current Year/ Base Year Amount × 100%

(2) Vertical analysis

Vertical analysis focuses on the relationships among financial statement items at a given point of time. A common-size financial statement is a vertical analysis in which each financial statement item is expressed as a percentage.

In income statements, all items usually are expressed as a percentage of sales, managers often pay close attention to the gross margin percentage, this percentage tend to be more stable for retailing companies because cost of goods sold excludes fixed costs.

Gross Margin (%) = (Sales – Cost of goods sold) / Sales

This measure indicates how much of each sales dollar is left after deducting the cost of goods sold to cover expenses and provide a profit.

In balance sheets, all items usually are expressed as a percentage of total assets. Common-size financial statements are particularly useful when comparing data from different companies.

(3) Ratio analysis

Various devices are used in the analysis of financial statement data to bring out the comparative and relative significance of the financial information presented. These devices include ration analysis. Ratio analysis is the starting point in developing the information desired by the analyst or decision maker inside the company.

Major types of ratios are classified in the following table:

Table (3- 2): Major types of ratios

Liquidity Ratios	Measures of the firm's short-run ability to pay its maturing obligations.
Asset Management Ratios	Measures how effectively the firm is managing its assets.
Debt Management Ratios	The extent to which a firm uses debt financing, or financial leverage.
Profitability Ratios	Measures of the degree of success or failure of a given enterprise or division for a given period of time, in other words, the net results of policies and decisions.
Market Value Ratios	Relates the firm's stock price to its earnings, cash flow, and book value per share to give management an indication of what investors think of the company's past performance and future prospects.

a) Liquidity Ratios

The ability to meet short-term obligations.

Current ratio = Current assets/ Current liabilities

Quick, or acid test, ratio = (Current assets – Inventories) / Current liabilities

Because inventories are the least liquid of a firm's current assets; hence they are the current assets on which losses are most likely to occur in a bankruptcy.

b) Asset Management Ratios

If a company does not have enough assets, it will lose sales, which will hurt profitability, free cash flow, and the stock price.

Inventory Turnover ratio = Sales/ Inventories

The Days Sales Outstanding (DSO) used to appraise receivables = Receivables/ Average sales per day

Fixed assets turnover ratio, to measure how effectively the firm uses its plant and equipment = Sales/ Net fixed assets

Also, Total assets turnover ratio = Sales/ Total assets

c) Debt Management Ratios

Debt ratio = Total liabilities/ Total assets

Creditors prefer low debt ratios because the lower the ratio, the greater the cushion against creditor's losses in the event of the liquidation. Stockholders, on the other hand, may want more leverage because it magnifies expected earnings.

d) Profitability Ratios

Profit margin on sales = Net income/ Sales, this ratio gives the profit per dollar of sales.

Return on total assets ROA after interest and taxes= Net income/ Total assets

Return on common equity ROE = Net income/ Common equity, stockholders invest to get a return on their money, and this ratio tells how well they are doing in an accounting sense.

e) Market Value Ratios

Price/Earnings (P/E) Ratio = Price per share/ Earnings per share, this ratio shows how much investors willing to pay per dollar of reported profits. P/E ratios are higher for firms with strong growth prospects.

In some industries, stock price is tied more closely to cash flow (net income plus depreciation) than to net income.

Price/ Cash flow ratio = Price per share/ Cash flow per share, to know if the growth prospects are above or below the industry's average.

Book value per share = Common equity/ Shares outstanding

Market/ book ratio M/B = Market price per share/ Book value per share, a book value is a record of the past. In contrast, market price is forward-looking incorporating investor's expectations of future cash flows.

Chapter 4: Methodology

4.1 Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the important (1, 2, 3, 4, 5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on the following Likert scale table (4.1):

Table (4- 1): Likert scale

Item	***Strongly agree***	***Agree***	***Somewhat agree***	***Disagree***	***Strongly Disagree***
Scale	5	4	3	2	1

4.2 Test of Normality for each field

Table (4-2) shows the results for Kolmogorov-Smirnov test of normality. From Table (4-2), the p-value for each field is greater than 0.05 level of significance, and then the distribution for each field is normally distributed. Consequently, parametric tests will be used to perform the statistical data analysis.

Table (4- 2): Kolmogorov-Smirnov test

Field	**Kolmogorov-Smirnov**	
	Statistic	**P-value**
Applying management accounting techniques in implementing planning process	0.590	0.878
Applying management accounting techniques in implementing controlling process	1.049	0.221
Applying management accounting techniques in decision-making process	0.580	0.889
All paragraphs of the questionnaire	0.645	0.800

4.3 Statistical analysis Tools

The researcher would use data analysis both qualitative and quantitative data analysis methods. The Data analysis will be made utilizing (SPSS 20). The researcher would utilize the following statistical tools:

1) Kolmogorov-Smirnov test of normality.
2) Pearson correlation coefficient for Validity, and also as a measure of the strength linear dependence between two variables, giving a value between +1 and -1 inclusive, the following general categories indicate a quick way of interpreting a calculated correlation coefficient value:
   0.0 to 0.20 very weak to negligible.
   0.20 to 0.40 weak, low correlation.
   0.40 to 0.70 moderate correlation.
   0.70 to 0.90 strong, high correlation.
   0.90 to 1.0 very strong correlation.
3) Cronbach's Alpha for Reliability Statistics.
4) Frequency and Descriptive analysis.
5) Parametric Tests (One-sample T test, Independent Samples T-test, Analysis of Variance).

T-test: is used to determine if the mean of a paragraph is significantly different from a hypothesized value 3 (Middle value of Likert scale). If the P-value (Sig.) is smaller than or equal to the level of significance, $\alpha \leq 0.05$, then the mean of a paragraph is significantly different from a hypothesized value 3. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 3. On the other hand, if the P-value (Sig.) is greater than the level of significance at $\alpha \leq 0.05$, then the mean a paragraph is insignificantly different from a hypothesized value 3. (Noted that, the mean is significantly different from 2.5 in table (5-10) based on the four responses available in the table)

The *Independent Samples T-test:* is used to examine if there is a statistical significant difference between two means among the respondents toward the extent of applying managerial accounting methods in planning, control, and decision-making due to (Education, Specialization, Number of employees, and the amount of capital).

The *One- Way Analysis of Variance (ANOVA):* is used to examine if there is a statistical significant difference between several means among the respondents toward the extent of applying managerial accounting methods in planning, controlling, and decision-making due to (post title, duration of experience in the present post, and the competition the company faces).

4.4 Validity of Questionnaire

Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity.

4.4.1 External Validity

The questionnaire is the data collection tool in this study, it was designed and revised many times, after that, and in order to ensure the external validity of the questionnaire, it was referred and refined by group of referees who are university professors, statistician, and professional.

4.4.2 Internal Validity

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire. It is measured by a scouting sample, which consisted of 30 questionnaires through measuring the correlation coefficients between each paragraph in one field and the whole field.

Table (4-3) clarifies the correlation coefficient for each paragraph of the "effect of management accounting techniques in performing planning process "and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha \leq 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (4- 3): Correlation coefficient of each paragraph of "applying management accounting techniques in implementing planning" with its field as a whole.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The company uses budgets in planning process.	.623	0.000*
2.	The company uses feasibility studies which include budgets to accept the directors' approval for new projects.	.476	0.000*
3.	Your planning process includes determining target clients and how to win their loyalty.	.566	0.000*
4.	Just in time method matches the nature of the company's activities.	.597	0.000*
5.	Your company practicing TQM through employee involvement	.710	0.000*
6.	Your company practicing TQM through working as a team	.822	0.000*
7.	Your company setting up organizational structure based on TQM principles	.877	0.000*
8.	Your company stepwise in development according to TQM principles	.788	0.000*
9.	Based on TQM principles, your company maintains consistency	.814	0.000*
10.	The company uses liquidity ratios to measure its ability to pay maturing obligations.	.652	0.000*
11.	Your company classifying its activities into harmonizing main groups to create cost pool for each activity.	.643	0.000*
12.	There is a correlation between the company's strategic objectives and implemented standards.	.614	0.000*

Table (4-3): Continued.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
13.	Receiving ISO certificates is one of your company's objectives.	.645	0.000*
14.	Your company needs a separated management accounting department integrated with financial department.	.517	0.000*

* Correlation is significant at the 0.05 level

Table (4-4) clarifies the correlation coefficient for each paragraph of the "Applying management accounting techniques in controlling process" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha \leq 0.05$, so it can be said that the paragraphs of this field are consistent and valid to measure what it was set for.

Table (4- 4): Correlation coefficient of each paragraph of " applying management accounting techniquess in controlling " with its field as a whole.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The company uses budgets to measure the gap between actual and planned performance also to determine the responsibility of the variances.	.524	0.000*
2.	The amount of your indirect costs requires applying ABC method.	.546	0.000*
3.	Your company sets standards for Profitability	.879	0.000*
4.	Your company sets standards for market share	.842	0.000*
5.	Your company sets standards for Productivity	.806	0.000*
6.	Your company maintain brand in some product or service	.705	0.000*

Table (4-4): Continued.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
7.	Your company sets standards for social responsibility	.850	0.000*
8.	Your company sets standards for Employees' satisfaction	.745	0.000*
9.	Your company balances between financial and non-financial measures (customer satisfaction, ability to improvement, deliver training to employees)	.711	0.000*
10.	According to BSC; your company translates its strategy into acceptable and understandable measures amongst staff members.	.636	0.000*
11.	Team leaders and middle level management have the authority to accept some small variances.	.550	0.000*
12.	The company uses financial analysis tools such as vertical analysis, horizontal analysis and ratio analysis in controlling and making comparisons with competitors.	.759	0.000*
13.	The company applies (pre-control) by ensuring that proper and relevant information are set in the plan and all variances were corrected before going forward.	.599	0.000*
14.	Your revenues go up as you provide products or render services faster.	.541	0.000*
15.	(Management by exception) principle is implemented in your company which focuses on weaknesses.	.606	0.000*

* Correlation is significant at the 0.05 level

Table (4-5) clarifies the correlation coefficient for each paragraph of the "Applying management accounting methods and decision-making" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha \leq 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (4- 5): Correlation coefficient of each paragraph of "applying management accounting techniques in decision-making "with its field as a whole.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Financial department is required to provide alternatives to the management during decision-making process.	.597	0.000*
2.	Management accounting information and reports are considered main resource in decision-making process.	.641	0.000*
3.	Your company uses vertical and horizontal financial analysis in decision-making process.	.797	0.000*
4.	Administrative staff in the company has a reasonable opportunity in setting objectives and drawing policies for the company.	.743	0.000*
5.	The company uses ABC in pricing decisions.	.621	0.000*
6.	Team leaders and production line managers are free to exercise their judgment in all routine processes.	.445	0.001*
7.	Cash management decisions based mainly on cash budget.	.566	0.000*
8.	Your management's decisions based on management accounting reports increased the competitive advantage	.822	0.000*
9.	Your management's decisions based on management accounting reports caused in cost reduction	.841	0.000*

Table (4-5): Continued.

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
10.	Your management's decisions based on management accounting reports did increase productivity	.869	0.000*
11.	Your management's decisions based on management accounting reports increased customers' satisfaction	.826	0.000*
12.	The company's long-run investment decisions depend on capital budgets.	.679	0.000*
13.	To take strategic decisions; your company make a comparisons with competitors about procedures and policies.	.698	0.000*

* Correlation is significant at the 0.05 level

4.4.3 Structure Validity of the Questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of likert scale.

Table (4-6) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at $\alpha \leq 0.05$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

Table (4- 6): Correlation coefficient of each field and the whole of questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Applying management accounting techniques in performing planning process	.924	0.000*
2.	Applying management accounting techniques in implementing controlling process	.964	0.000*
3.	Applying management accounting techniques in decision-making process	.915	0.000*

* Correlation is significant at the 0.05 level

4.5 Reliability of the Research

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring. The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient.

4.5.1 Cronbach's Coefficient Alpha

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (4-7) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.906 and 0.923. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.966 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table (4- 7): Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
1.	Applying management accounting techniques in performing planning process	0.906
2.	Applying management accounting techniques in implementing control	0.923
3.	Applying management accounting techniques in decision-making	0.915
	All paragraphs of the questionnaire	0.966

Thereby, it can be said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution for the population sample.

4.6 Population and sample

Palestine Exchange (PEX) was established in 1995 to promote investment in Palestine. The PEX was fully automated upon establishment- a first amongst the Arab Stock Exchanges. The PEX became a public shareholding company in February 2010 responding to principles of transparency and good governance. The PEX operates under the supervision of the Palestinian Capital Market Authority.

The PEX strives to provide an enabling environment for trading that is characterized by equity, transparency and competence, serving and maintaining the interest of investors. The PEX is very appealing in terms of market capitalization, it is financially sound, and well capitalized to maintain a steady business in a volatile world, as it passed with the minimum level of impact of the global financial crisis compared to other MENA Exchanges.

There are 46 listed companies on PEX as of 31/12/2011 (the number of listed companies is 48 till 10/7/2012, 14 of them are working in Gaza strip) with market capitalization of about $ 3 billion across five main economic sectors; banking and financial services, insurance, investments, industry, and services. In 2009, the PEX ranked thirty third amongst the worldwide security markets, and regionally comes in second in terms of investor protection. The following table (4-8) contains the Palestinian companies listed in PEX and working in Gaza:

Table (4- 8): List of companies that comprise the research population

	Name of company	Sector	Year of establishment	Year of listing in PEX
1	Arab Islamic Bank (AIB)	Banking & Financial Services	1995	1997
2	Ahliea Insurance Group (AIG)	Insurance	1994	1997
3	Bank of Palestine (BOP)	Banking & Financial Services	1960	2005
4	Global United Insurance (GUI)	Insurance	2010	2011
5	Palestine Islamic Bank (ISBK)	Banking & Financial Services	1995	2009
6	National Insurance (NIC)	Insurance	1992	1997

Table (4-8): Continued.

	Name of company	Sector	Year of establishment	Year of listing in PEX
7	Palestine Development & Investment (PADICO)	Investments	1993	1997
8	Palestine Telecommunications (PALTEL)	Services	1995	1997
9	Palestine Electric (PEC)	Services	1999	2004
10	Palestine Investment Bank (PIBC)	Banking & Financial Services	1994	1997
11	Palestine Real Estate Investment (PRICO)	Investments	1994	1997
12	Al Quds Bank (QUDS)	Banking & Financial Services	1995	1997
13	Trust International Insurance (TRUST)	Insurance	1994	2008
14	Union Construction & Investment (UCI)	Investments	2005	2007

In the light of the 14 companies listed in the table (4-8), the population of the study consists of executive managers, financial managers, accountants, internal auditors and the employees who work inside the finance function in the listed companies. The number of 50 questionnaires (which is the sample size) was distributed to the targeted population; and then retrieved at a response rate of 100%.

Chapter 5: Data Analysis and Discussion

5.1 Introduction

The aim of this chapter is to analyze the empirical data which were collected through the questionnaire in order to provide a real picture about the effect of management accounting techniques in Palestinian companies. This chapter includes information about Palestine exchange, targeted companies, personal data analysis, and hypothesis testing.

5.2 Information about respondents and companies

Job Title

Table (5-1) below, classifies the job title category for the respondents.

Table (5- 1): Job Titles

Job Title	Frequency	Percent
Executive manager	1	2.0
Financial manager	6	12.0
Accountant	21	42.0
Internal auditor	11	22.0
Others	11	22.0
Total	50	100.0

As indicated in the table (5-1), 76% of the respondents are: financial managers, accountants, and internal auditors in targeted companies. In other words they have an accountancy background which will enable them to have better grasp, and then respond objectively, more than others, to the management accounting issues including in the questionnaire. The job title (others) in the table (5-1) includes: information technology employees, sales persons, cashier, statisticians and customer service employee.

Educational attainment

The respondents classified into two groups based on their educational attainment, as illustrated in table (5-2) below.

Table (5- 2): Educational attainment

Academic degree	Frequency	Percent
Masters and above	15	30.0
Bachelors	35	70.0
Diploma	-	-
High school or less	-	-
Total	50	100.0

The results shown in table (5-2) could simply reflect the required qualifications regarding the PEX companies' employees.

Specialization

The responses obtained in the field of specialization are shown in the following table (5-3).

Table (5- 3): Specialization

Specialization	Frequency	Percent
Accounting	37	74.0
Business administration	8	16.0
Economy	1	2.0
Banking and finance	-	-
Others	4	8.0
Total	50	100.0

According to table (5-1) presented earlier (76% are accountants, internal auditors, and financial managers). Actually, the research population consists of employees who have an accounting background. The (others) category listed in the table (5-3) includes: information technology and statistics specialty.

Duration of experience in the present post

Table (5-4) below classifies the respondents according to their career duration.

Table (5- 4): Duration of experience in the present post

Duration of experience in the present post	Frequency	Percent
Less than 5 years	8	16.0
Between 5-9 years	16	32.0
Between 10-15 years	12	24.0
More than 15 years	14	28.0
Total	50	100.0

Based on the results indicated in the table (5-4), just only 16% of respondents have an experience less than five years. Hiring based on experience is a common trend among companies. Many companies tend to hire skilled and experienced employees to improve performance and productivity quickly.

Main activities of the company

Targeted companies included in this study are segregated into four categories as presented in the following table (5-5).

Table (5- 5): Main activities of the company

Main activities of the company	Frequency	Percent
Industry	-	-
Services	17	34.0
Investment	5	10.0
Insurance	8	16.0
Banking and finance services	20	40.0
Other	-	-
Total	50	100.0

Upon the table (5-5), the only sector that is not represented in Gaza is the industrial sector. The industrial sector faces many political and economic reasons, essentially due to the severe import restriction Israel imposes on long list of raw materials and machines. These restrictions directly harm any existed local industry or hinder establishing new industrial projects.

Company age

The following table (5-6) classifies the targeted companies according to the duration since the company begins its activity.

Table (5- 6): The duration since the establishment of a company

The company has been practicing its activities for	Frequency	Percent
Less than 5 years	3	6.0
Between 5-9 years	6	12.0
Between 10-15 years	7	14.0
More than 15 years	34	68.0
Total	50	100.0

Based on the table (5-6), the great percent 68% indicated to more than 15 working years. Actually most of PEX companies were established simultaneously with the establishment of Palestine Exchange in 1995 at the beginning of the Palestinian authority era with new hopes of economic opportunities.

Number of employees in the company

Table (5-7) below includes four categories about the number of employees in the targeted companies.

Table (5- 7): Number of employees in the company

Number of employees in the company	Frequency	Percent
Less than 20 employees	3	6.0
Between 21-50 employees	5	10.0
Between 51-100 employees	1	2.0
More than 100 employees	41	82.0
Total	50	100.0

It seems that 82% of these companies employed more than 100 staff member, this issue is justified in these corporations according to the relative complexity and the amount of investments which require a clear hierarchy with diversification in staff specialties.

The amount of company's capital

The next table (5-8) classifies the targeted companies into four categories according to the amount of capital.

Table (5- 8): The amount of company's capital

The amount of company's capital	Frequency	Percent
Between 2- less than 5 million Jordanian dinars	2	4.0
Between 5- less than 10 million Jordanian dinars	7	14.0
Between 10- less than 15 million Jordanian dinars	3	6.0
More than 15 million Jordanian dinars	38	76.0
Total	50	100.0

Noted that the Palestine Securities Exchange rules (listing regulations) article number five states that: "the subscribed share capital shall not be less than two million (2,000, 000) Jordanian Dinars and shall be paid in full".

The degree of competition the company faces

When analyzing the responses regarding the degree of competition, the results are as presented in the following table (5-9), 40% very big competition, 30% big competition, 24% moderate, 6% no competition.

Table (5- 9): The degree of competition the company faces

The degree of competition the company faces	Frequency	Percent
Very big	20	40.0
Big	15	30.0
Moderate	12	24.0
Weak	-	-
No competition	3	6.0
Total	50	100.0

Based on the table (5-9), a business environment according to the majority of respondents is competitive, which means strong competition is experienced by the majority of targeted companies. This status deserves more searching in the development and increasing the role and practicing of management accounting techniques in such a competitive environment.

5.3 Analysis for "Respondents' technical knowledge of Management accounting techniques"

Table (5-10) below shows the following results:

- The mean for "Budgets and Financial statement analysis" equals 3.74 (93.50%), Test-value = 15.53, and P-value = 0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean is significantly greater than the hypothesized value 2.5. Among the six managerial accounting techniques mentioned in table (5-10), the respondents' knowledge of budgets and financial statement analysis techniques is the number one relative to other techniques.

- On the other hand "Balanced score card (BSC)" technique scored the mean equals 3.22 (80.50%), Test-value = 6.06, and P-value = 0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean is significantly greater than the hypothesized value 2.5. So that the respondents' knowledge of balanced scorecard is the least one relative to other mentioned techniques.

Basically it is a logical introductory question before receiving a reliable opinion from any respondent about an issue to determine his degree of knowledge and understanding of what he/she is required for response to, in this way, they will be able to give a valid response based on their opinion. Six management accounting techniques are tested in the study listed in the table (5-10) under four rating categories as shown in the table. Responses obviously reflect a high level of knowledge amongst the fifty respondents in the included management accounting methods generally; the most highly ranked are budgets and financial statement analysis. The high proportional mean of budgets demonstrates the proportional significance of budgets amongst accountants, auditors, and financial manager in Palestinian corporations, this matter is proportional with many previous studies local and international exhibited the high importance of budgets inside any management system, for example, El-Da'ur study (2008) found that capital budgets and operational budgets were used widely by the sample in Palestinian sectors (investment, banking, insurance, and industry) with high proportional significance. Yeshmin & Hossan study (2011) concluded that among the eight influential factors which tested, budgetary control is the most significant factor for decision-making in manufacturing organizations. Banovic study (2005) concluded that despite the many criticism that have come from budgets practitioners, budgeting theory has been very useful in pinpointing specific problems and providing adequate solutions related to budgeting systems. The level of respondents' knowledge of Financial statement analysis get a number one with budgets, this great understanding reflects how the community of sample evaluate the importance of financial statement analysis to understand the economics of a company, to help forecast its future, to help compare both the company against its past performance and with other competitors as Weil and Stickney (2006) argued. On the other hand, Balanced scorecard method (BSC) as the community of respondents classified in the last, this result was expected if we take in consideration the modernity relatively of this concept in management accounting, and the obstacles in developing countries (economical and cultural) to implement it. Other methods (ABC, TQM, and JIT) are ranked in between.

Table (5- 10): Means and Test values for "the extent of respondents' technical knowledge in management accounting techniques"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Budgets	3.74	93.50	15.53	0.000*	1
2.	Activity based costing (ABC)	3.32	83.00	7.55	0.000*	5
3.	Just-in-time method (JIT)	3.40	85.00	8.74	0.000*	4
4.	Total quality management (TQM)	3.42	85.50	9.26	0.000*	3
5.	Balanced score card (BSC)	3.22	80.50	6.06	0.000*	6
6.	Financial statement analysis (FSA)	3.74	93.50	15.53	0.000*	1

* The mean is significantly different from 2.5

5.4 Analysis for each field

Applying management accounting techniques in planning process.

Table (5-11) shows the following results:

- The mean of paragraph #10 “The company uses liquidity ratios to measure its ability to pay maturing obligations” equals 4.42 (88.33%), Test-value = 16.01, and P-value = 0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. It seems that the respondents give the highest percentage of agreement toward this paragraph.
- Paragraph #4 “Just in time method matches the nature of the company's activities” scored the mean equals 3.57 (71.43%), Test-value = 4.90, and P-value = 0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. It can therefore, be concluded that the respondents agreed to this paragraph but give the lowest percentage.
- The mean of the field as a total “applying management accounting techniques in performing planning process” equals 4.04 (80.88%), Test-value = 13.82, and P-value=0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. Therefore, the respondents agreed to this field “Applying management accounting techniques and performing planning process ".

When analyzing the results shown in the next table (5-11) we find an overall agreement amongst the community of respondents toward the actual implementation of different management accounting methods and techniques inside the planning system in their companies. Despite an overall agreement, the means of paragraphs are varied which reflect the concentration on some techniques over others. The highest mean regarding paragraph #10 as presented above, determined a great interesting in Palestinian corporations to determine whether they will be able to continue as a going concern, whether they will be able to pay their bills on time. Moreover, to avoid a liquidity crises which transfers worldwide as a domino since 2008 global financial crises, also to provide managers with useful limits to help them borrowing and spending efficiently, especially in the light of the present state of businesses in Gaza that suffer a financial distress. On the other hand, paragraph #4 got the least percent; this is not surprising amongst the targeted companies, taking into consideration the importance of JIT method in manufacturing practitioners, noted that none of targeted companies is classified under industrial sector.

Table (5- 11): Means and Test values for "applying management accounting techniques in performing planning process"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The company uses budgets in planning process.	4.32	86.40	13.66	0.000*	2
2.	The company uses feasibility studies which include budgets to accept the directors' approval for new projects.	4.26	85.20	13.41	0.000*	3
3.	Your planning process includes determining target clients and how to win their loyalty.	4.26	85.20	11.46	0.000*	3
4.	Just in time method matches the nature of the company's activities.	3.57	71.43	4.90	0.000*	14
5.	The company practicing TQM to achieve Employee involvement	3.78	75.51	6.59	0.000*	13
6.	The company practicing TQM through Working as a team	3.98	79.59	8.03	0.000*	8
7.	The company applying TQM in Organizational structure	3.94	78.78	6.80	0.000*	11
8.	The company adapting TQM to achieve Stepwise in development	3.96	79.18	7.76	0.000*	9
9.	The company implementing TQM to ensure Consistency	4.12	82.45	9.74	0.000*	6
10.	The company uses liquidity ratios to measure its ability to pay maturing obligations.	4.42	88.33	16.01	0.000*	1

Table (5-11): Continued.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
11.	Your company classifying its activities into harmonizing main groups to create cost pool for each activity.	4.10	82.04	10.80	0.000*	7
12.	There is a correlation between the company's strategic objectives and implemented standards.	4.20	84.00	13.28	0.000*	5
13.	Receiving ISO certificates is one of your company's objectives.	3.94	78.80	6.95	0.000*	10
14.	Your company needs a separated management accounting department integrated with financial department.	3.82	76.40	5.90	0.000*	12
	All paragraphs of the field	4.04	80.88	13.82	0.000*	

* The mean is significantly different from 3

Applying management accounting techniques in controlling process.

Table (5-12) shows the following results:

- Paragraph #1 “The company uses budgets to measure the gap between actual and planned performance also to determine the responsibility of the variances” has a mean of 4.36 (87.20%), Test-value = 15.24 and P-value = 0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3, so that the respondents were of the view that (with high average percentage) agreed to this paragraph.
- Paragraph #11 “Team leaders and middle level management have the authority to accept some small variances” scored a mean of 3.40 (68.00%), Test-value = 2.80, and P-value = 0.007 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3, accordingly, the respondents agreed moderately to this paragraph.

- The mean of the field "applying management accounting techniques in controlling process" equals 3.96 (79.29%), Test-value = 12.57, and P-value=0.000 which is smaller than the level of significance $\alpha \leq 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value. So that the respondents agreed on the field of "Applying management accounting techniques in implementing control".

Through analyzing statistical results shown in the table (5-12) below, management accounting practices have successfully used in controlling process, but attention is focused on the paragraph #1 which ranked number one, it seems that according to respondents the budget is a key tool in control process through ongoing operations as benchmark using to bridge the gap between planned and actual performance, also to determine responsibilities. Since the budget is a device that widely used for managerial control, the responses come to ensure this reality. Otherwise, the mean of paragraph #11 is the minimum in this field. This result could reflect the level of centralization in Palestinian companies and the lack of delegation. In the case of more delegation, managers will feel free to seek and accept more responsibilities from higher level managers, and will enhance employees' self-confidence and willingness to take initiative.

Table (5- 12): Means and Test values for "applying management accounting techniques in controlling"

	Item	**Mean**	**Proportional mean (%)**	**Test value**	**P-value (Sig.)**	**Rank**
1.	The company uses budgets to measure the gap between actual and planned performance also to determine the responsibility of the variances.	4.36	87.20	15.24	0.000*	1
2.	The amount of your indirect costs requires applying ABC method.	3.68	73.60	5.40	0.000*	13
3.	Your management sets profitability standards	4.27	85.31	12.14	0.000*	2
4.	Your management sets market share standards	4.22	84.40	11.30	0.000*	5

Table (5-12): Continued.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
5.	Your management sets productivity standards	4.24	84.80	11.37	0.000*	3
6.	Your company try to maintain brand in some product or service	4.22	84.49	11.12	0.000*	4
7.	Your management sets social responsibility criteria	4.10	82.04	8.85	0.000*	6
8.	Your management sets employees' satisfaction criteria	3.89	77.87	6.88	0.000*	9
9.	Your company balances between financial and non-financial measures (customer satisfaction, ability to improvement, deliver training to employees)	4.00	80.00	9.71	0.000*	8
10.	According to BSC; your company translates its strategy into acceptable and understandable measures amongst staff members.	3.66	73.20	6.26	0.000*	14
11.	Team leaders and middle level management have the authority to accept some small variances.	3.40	68.00	2.80	0.007*	15
12.	The company uses financial analysis tools such as vertical analysis, horizontal analysis and ratio analysis in controlling and making comparisons with competitors.	3.76	75.20	6.54	0.000*	11
13.	The company applies (pre-control) by ensuring that proper and relevant information are set in the plan and all variances were corrected before going forward.	3.82	76.40	9.22	0.000*	10

Table (5-12): Continued.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
14.	Your revenues go up as you provide products or render services faster.	4.08	81.60	8.95	0.000*	7
15.	(Management by exception) principle is implemented in your company which focuses on weaknesses.	3.76	75.20	6.54	0.000*	11
	All paragraphs of the filed	3.96	79.29	12.57	0.000*	

* The mean is significantly different from 3

Applying management accounting techniques in decision-making process.

Table (5-13) shows the following results:

- The mean of paragraph #3 “Your company uses vertical and horizontal financial analysis in decision-making process” equals 4.16 (83.20%), Test-value = 11.55, and P-value = 0.000 which is smaller than the level of significance $\alpha \le 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3, this conclude that the respondents agreed to this paragraph.
- While paragraph #5 “The company uses ABC in pricing decisions” has a mean of 3.68 (73.60%), Test-value = 5.87, and P-value = 0.000 which is smaller than the level of significance $\alpha \le 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. So that the respondents agreed to this paragraph.
- The field “applying management accounting techniques and decision-making” as a total scored the mean of 3.95 (78.93%), Test-value = 13.14, and P-value=0.000 which is smaller than the level of significance $\alpha \le 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value. So that the respondents agreed on the field of “Applying management accounting techniques in decision-making".

According to statistical results regarding table (5-13) below, also there is an overall agreement amongst respondents like the two previous fields (planning and controlling). The first rank is paragraph #3. Palestinian companies obviously concern on financial statement analysis (vertical and horizontal) to make up decisions, financial statement analysis help them to determine and analyze the main two survival factors which are profitability and solvency especially in a current turbulent status with high degree of uncertainties. There is an excessive reliance on the use of financial statement analysis; it's worthwhile to note that FSA have the first rank both as a domain of knowledge amongst respondents table (5-10) and as a first tool in decision-making process. On the other hand, using activity based costing in pricing decisions got the lowest agreement as presented in the table. ABC considered a modern technique, but its time consuming and costly. Sabbah study (2008) also recognized ABC system as the least one implemented among industrial companies in Gaza strip from which modern techniques tested (TQM, BSC, JIT, and ABC).

Table (5- 13): Means and Test values for "applying management accounting techniques in decision-making process"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Financial department is required to provide alternatives to the management during decision-making process.	4.06	81.20	11.50	0.000*	3
2.	Management accounting information and reports are considered main resource in decision-making process.	4.12	82.40	12.02	0.000*	2
3.	Your company uses vertical and horizontal financial analysis in decision-making process.	4.16	83.20	11.55	0.000*	1
4.	Administrative staff in the company has a reasonable opportunity in setting objectives and drawing policies for the company.	3.96	79.20	10.65	0.000*	7

Table (5-13): Continued.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
5.	The company uses ABC in pricing decisions.	3.68	73.60	5.87	0.000*	13
6.	Team leaders and production line managers are free to exercise their judgment in all routine processes.	3.72	74.40	6.50	0.000*	12
7.	Cash management decisions based mainly on cash budget.	3.92	78.37	11.25	0.000	9
8.	Managerial accounting reports in your company increased competitive advantage	3.98	79.59	9.15	0.000*	6
9.	Managerial accounting reports in your company performed cost reduction	3.88	77.55	7.38	0.000*	11
10.	Managerial accounting reports in your company increased productivity	4.02	80.41	9.90	0.000*	4
11.	Managerial accounting reports in your company increased customers' satisfaction	4.02	80.40	8.79	0.000*	5
12.	The company's long-run investment decisions depend on capital budgets.	3.90	77.96	10.13	0.000*	10
13.	To take strategic decisions; your company make a comparisons with competitors about procedures and policies.	3.92	78.40	8.36	0.000*	8
	All paragraphs of the filed	3.95	78.93	13.14	0.000*	

* The mean is significantly different from 3

5.5 Research Hypothesis

H1: Palestinian companies listed in PEX and working in Gaza, apply managerial accounting techniques in planning, controlling and decision making at 0.05 levels.

Based on the result that p-value (sig.) is smaller than 0.05 (level of significance) in previously exhibited tables (5-11), (5-12) and (5-13) through pages from p.105 to p.111, therefore, hypothesis #1 is supported.

H2: There is a significant relation between applying managerial accounting techniques in planning, and the respondents' technical knowledge in management accounting.

Table (5-14) shows that the correlation coefficient between applying managerial accounting techniques in planning process, and the respondents' technical knowledge in management accounting equals 0.377 and the p-value (Sig.) equals 0.003. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha \leq 0.05$. Accordingly, there exists a significant positive relation between applying managerial accounting methods in performing planning process, and respondents' knowledge in management accounting techniques.

Consistent with the hypothesis, the results showed a statistically significant effect of managerial accounting techniques in planning process in Palestinian companies listed in Palestine Exchange (working in Gaza). However, the correlation = 0.377 (which considered quite small correlation), so hypothesis #2 was partially supported.

Table (5- 14): Correlation coefficient between applying managerial accounting techniques in planning and respondents' knowledge in management accounting

Hypothesis	Pearson Correlation Coefficient	P-Value (Sig.)
There is a significant relation between applying managerial accounting techniques in planning, and the respondents' technical knowledge in management accounting.	0.377	0.003*

* Correlation is statistically significant at 0.05 levels

H3: There is a significant relation between applying managerial accounting techniques in controlling, and the respondents' technical knowledge in management accounting.

Table (5-15) shows that the correlation coefficient between applying managerial accounting techniques in controlling, and the respondents' technical knowledge in management accounting equals 0.367 and the p-value (Sig.) equals 0.004. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha \leq 0.05$. So that there exists significant positive relationship between applying managerial accounting methods in implementing control process and the respondents' technical knowledge in management accounting.

Consistent with the hypothesis, the results showed a statistically significant effect of managerial accounting methods in controlling process in Palestinian companies listed in Palestine Exchange (working in Gaza). However, the correlation = 0.367 (which considered quite small correlation), so hypothesis #3 was partially supported.

Table (5- 15): Correlation coefficient between applying managerial accounting techniques in controlling and respondents' knowledge in management accounting

Hypothesis	Pearson Correlation Coefficient	P-Value (Sig.)
There is a significant relation between applying managerial accounting techniques in controlling, and the respondents' technical knowledge in management accounting.	0.367	0.004*

* Correlation is statistically significant at 0.05 levels

H4: There is a significant relation between applying managerial accounting techniques in decision-making, and the respondents' technical knowledge in management accounting.

Table (5-16) shows that the correlation coefficient between applying managerial accounting techniques in decision-making at top-level management, and respondents' technical knowledge in management accounting equals 0.339 and the p-value (Sig.) equals 0.008. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha \leq 0.05$. It could be concluded that there exists a significant positive relationship between applying managerial accounting techniques in decision-making process, and the respondents' technical knowledge in management accounting techniques.

Consistent with the hypothesis, the results showed a statistically significant effect of managerial accounting methods in decision-making process in Palestinian companies listed in Palestine Exchange (working in Gaza). However, the correlation = 0.339 (which considered quite small correlation), so hypothesis #4 was partially supported.

Table (5- 16): Correlation coefficient between applying managerial accounting techniques in decision-making and respondents' knowledge in management accounting

Hypothesis	Pearson Correlation Coefficient	P-Value (Sig.)
There is a significant relation between applying managerial accounting techniques in decision-making, and the respondents' technical knowledge in management accounting.	0.339	0.008*

* Correlation is statistically significant at 0.05 levels

H5: There is a positive correlation between the size of company (number of employees & capital) and performing planning and controlling by using management accounting techniques.

H5 a: There is a positive correlation between the size of company (number of employees) and performing planning and controlling by using management accounting techniques.

Table (5-17) shows that the p-value (Sig.) is greater than the level of significance $\alpha \leq 0.05$ for the field "Applying management accounting techniques in decision-making", and then there is insignificant difference among the respondents regarding to this field due to number of employees which means that the number of employees has no effect on this field.

Table (5-17) shows that the p-value (Sig.) is smaller than the level of significance $\alpha \leq 0.05$ for the other fields, and then there is significant difference among the respondents regarding to these fields due to number of employees. So that the number of employees has effect on these fields. Next table (5-17) reveals the following:

For all fields, More than 100 employees' companies' respondents have the higher means than Less than 100 employees' companies' respondents.

Accordingly, the results shows a significant positive relationship between the size of company (number of employees) and performing planning and controlling by using management accounting techniques with a higher degree in big companies. The results supported hypothesis# 5a.

Table (5- 17): Independent Samples T-test of the fields and their p-values for number of employees

No.	Field	Test Value	Sig.	Means	
				Less than 100 employees	**More than 100 employees**
1.	Applying management accounting techniques and performing planning process	10.645	0.002*	3.56	4.15
2.	Applying management accounting techniques and implementing control	6.130	0.017*	3.58	4.05
3.	Applying management accounting techniques and decision-making	2.104	0.153	3.73	3.99
	All paragraphs of the questionnaire	6.690	0.013*	3.62	4.07

* Means differences are significant at $\alpha = 0.05$

H5 b: There is a positive correlation between the size of company (the amount of capital) and performing planning and controlling by using management accounting techniques.

Table (5-18) shows that the p-value (Sig.) is greater than the level of significance $\alpha \leq 0.05$ for each field, and then there is insignificant difference in respondents' answers toward each field due to the amount of capital. So that the characteristic of the amount of capital has no effect on performing planning and controlling by using management accounting techniques.

Therefore, hypothesis#5b was rejected at the $\alpha \leq 0.05$.

Table (5- 18): Independent Samples T-test of the fields and their p-values for the amount of capital

No.	Field	Test Value	Sig.	Means	
				Less than 15 million Jordanian dinars	More than 15 million Jordanian dinars
1.	Applying management accounting techniques in performing planning process	3.046	0.087	4.27	3.97
2.	Applying management accounting techniques in controlling	0.285	0.596	4.04	3.94
3.	Applying management accounting techniques in decision-making	0.850	0.361	4.06	3.91
	All paragraphs of the questionnaire	1.255	0.268	4.13	3.94

H6: There is a positive correlation between the degree of competition the company faces, and its employees' technical knowledge in management accounting techniques.

Table (5-19) shows that the p-value (Sig.) is greater than the level of significance $\alpha \leq 0.05$ for this field, and then there is insignificant difference in respondents' answers toward the competition the company faces and based on their knowledge. It could be concluded that the characteristic of competition the company faces has no effect in this field. Therefore, hypothesis#6 was rejected at the $\alpha \leq 0.05$.

Table (5- 19): One-Way Analysis of Variance (ANOVA) Test of the field and their p-values for the competition the company faces

Field	Test Value	Sig.	Means		
			Very big	Big	Moderate
Employees technical knowledge in management accounting methods	0.925	0.404	3.53	3.58	3.32

H7: There is a significant difference at 0.05 levels between the respondents towards applying management accounting techniques in planning, controlling and decision-making; due to personal traits.

Table (5-20) shows that the p-value (Sig.) is greater than the level of significance $\alpha \leq 0.05$ for each personal trait, then there is insignificant difference in respondents' answers toward applying management accounting techniques in planning, controlling and decision-making due to each personal trait. So that the personal traits have no effect on applying management accounting techniques in planning, controlling and decision-making. Therefore, hypothesis#7 was rejected at the $\alpha \leq 0.05$.

Table (5- 20): One-Way Analysis of Variance (ANOVA) and Independent Samples T Test for Personal Traits

No	Personal Traits	Test Name	Test Value	P-value(Sig.)
1.	Post title	One- Way Analysis of Variance (ANOVA)	1.979	0.130
2.	Education	Independent Samples T Test	0.625	0.535
3.	Specialization	Independent Samples T Test	0.606	0.548
4.	Duration of experience in the present post	One- Way Analysis of Variance (ANOVA)	0.103	0.958

Chapter 6: Conclusion and Recommendations

6.1 Introduction

This research sought to examine the role of some traditional and modern management accounting methods (budgets, ABC, JIT, TQM, FSA, and BSC) in implementing the basic three functions of management: planning, controlling, and decision-making process within Palestinian companies listed in PEX and working in Gaza. Structured questionnaire was administered amongst fifty respondents in fourteen companies, and then it was received completely.

Upon analyzing and considering the tables of data mentioned in the previous two chapters with proper statistical tests, it's time to try answering the research questions and achieve the purpose of the study. This chapter provides the main conclusions which were obtained from the hypothesis testing and data analysis. In addition, the chapter will present the recommendations that emerged from the research, and then future research will be listed.

6.2 Conclusion

The following is a summary of the conclusions that could be drawn from the research.

1. The results show strong competition between Palestinian companies according to respondents' evaluation. The responses for "very big competition" and "big competition" were 40%, 30% respectively, companies operating within more competitive sectors; are more likely to employ managerial accounting techniques in management.
2. The findings reveal that respondents have a good technical knowledge and understanding in managerial accounting techniques included in this study with the rank in descending order according to proportional means as follows: budgets, FSA, TQM, JIT, ABC, and BSC.
3. Respondents are perceived that management accounting techniques and practices are employed in their companies with uneven degrees to implement planning. The total proportional mean for this field = 80.88%, respondents agreed that their companies use liquidity ratios to measure its ability to pay maturing obligations, use budgets as a planning tool, pay attention to accept customers and the way to retain them, interlink strategic objectives with

standards, try to keep sustainable through consistency, and create cost pools for each activity.

4. The findings showed less agreement amongst respondents on the appropriateness of JIT technique with the nature of their companies (noted that the population of the study does not include any industrial company), also the agreements were lower regarding the implementation of TQM in both employee involvement, and working as a team. Moreover, receiving ISO certificates as an objective, and calling for establish separated management accounting departments were scored lower means.
5. There is an agreement on applying management accounting techniques in controlling process within Palestinian companies with a proportional mean = 79.29%. Respondents agreed that budgets are used in their companies to determine any gap between planned and actual performance also to specify the responsibility. Moreover, managements in these companies set standards for profitability, productivity, social responsibility, and market share. But in the contrast, lower proportional means are shown regarding the following issues: the need for ABC due to increasing indirect costs, the degree of authority given to middle level managers, using FSA tools as a benchmark, and translate strategies into acceptable and understandable measures amongst staff members. Also management by exception that's focus on weaknesses, criteria for employee satisfaction and pre-control type have a lower proportion.
6. Targeted Palestinian companies implement management accounting techniques and practices in decision-making with proportional mean = 78.93%, the agreements were on adapting horizontal and vertical FSA in making decisions. Management accounting reports are considered main source in favor of decision maker, also the majority of respondents agreed that financial departments are required to provide alternatives to management (noted that this is one of management accountant roles as an intention directing and problem solving).
7. The findings reveal the existence of opportunities for administrative staff members to participate in setting objectives and drawing policies in the company, whereas the statement "team leaders and line managers are free to exercise their judgment in all routine process" scored lower mean. It is likely that the approval of the first statement reflects the desire among respondents,

while the lower mean for the second statement reflects the status of centralization existing in Palestinian companies.

8. The results showed that there were more agreements on increasing both (productivity and customers' satisfaction) more than (cost reduction and competitive advantages) due to management accounting reports.
9. Responses given revealed that both cash budgets and capital budgets are used in cash management decisions and long-run investments decisions respectively.
10. Responses scored the statement "the company uses ABC model in pricing decisions" as the least one in the rank of applying managerial accounting techniques in decision-making. This might be attributed to the complexity of ABC model, also this technique considered time consuming and costly.
11. The results supported the positive relation between respondents' technical knowledge in managerial accounting techniques, and using these techniques in implementing planning, controlling, and decision-making, but the correlation coefficient interlinked these relations is still low, it may interpreted that Palestinian companies managements don't perceive that management accounting methods are a priority in their agenda. This could be for several reasons such as the primitive industry existed in Gaza, the dependency of Palestinian economy on services sector, political unrest and economic instability as a result of Israeli occupation and continuous aggressive, and the dependency on external financial donations.
12. The systematic implementation of planning and controlling by using managerial accounting techniques in Palestinian corporations is proportional to the number of employees (i.e. number of divisions and number of branches). Results reveal organizational size as an influential characteristic in explaining the relative importance of planning and controlling by using managerial accounting techniques. On the other hand, there is no effect of the number of employees (i.e. number of divisions and number of branches) in applying management accounting methods in decision-making process; this could be explained by making decisions, especially strategic, within a narrow circle at the top level of management regardless the number of employees. Decision-making process is made amongst members of the board of directors.

13. Results showed that the competitive environment between Palestinian companies, has no effect (as a motivate factor) on the employees' management accountancy qualifications, skills and capabilities.
14. The respondents' personal traits (post title, educational attainment, specialization, and experience) have no effect on their responses about applying management accounting techniques in planning, controlling, and decision-making, which may attributed to homogeneity of the sample.
15. Responses analysis showed that there is insignificant difference in respondents' answers toward paragraphs due to the company's capital which divided into four categories in the first part of the questionnaire (noted that 76% of targeted companies are in the same category of capital)

6.3 Recommendations

Based on the research findings and conclusions, the following recommendations are made additional ideas to those interested in the field of managerial accounting.

1. The status of strong competition between Palestinian companies should motivate managers to pay more attention on applying management accounting techniques and practices, especially modern techniques.
2. Since respondents have a good knowledge in management accounting techniques within a highly competitive environment, the possibility of establish separated management accounting departments and take an advantage of staff's knowledge in practical application, is more urgent.
3. Pioneers and owners of capital are required to accept the challenge, and make real initiatives on the ground to create new industrial projects in Gaza.
4. Palestinian companies are recommended to put receiving ISO certificates as a priority; taking into consideration the requirements to change some rules and regulations to fit ISO standards.
5. It would be better for the Palestinian companies apply TQM in order to improve the systematically stepwise for the company as a whole, based on hard work, discipline, intensive training, and efficient implementation of techniques and resources.
6. Adapting ABC model is an advantage both in costing and pricing decisions. Companies who adapt ABC model in pricing decisions, according to pricing

experts, are able to lower their average quoted prices yet improving their profitability.

7. Palestinian companies are recommended to accept BSC method as a roadmap, this methodology tends to solve challenges in balancing the theories of a strategy with its execution.
8. Palestinian companies' managements still need to pay primary attention to modern management accounting techniques and do their best to correlate these techniques with planning, controlling and decision-making in order to improve performance and increase the quality of decision-making.

6.4 Recommendation for further studies

In the light of this study, the researcher recommends the following studies in the context of Palestine:

1. Examine the reality of using strategic management accounting in Palestinian companies, based on the greater focus of SMA on the comparison between competitors.
2. Exploratory study in order to reveal the opportunities to adoption of the principle of TQM as a fixed policy in Palestinian companies.

REFERENCES

Activity Based Costing. (2012, Sep. 26). Activity based costing ABC: Advantages and benefits. Retrieved from http://activitybasedcostingabc.com/advantages-and-benefits.html

Alleyne, P. Weekes-Marshall, D. An exploratory study of management accounting practices in manufacturing companies in Barbados. *International journal of business and social science*, Vol.2 No.9, May 2011.

Arnold, J., & Turley, S. (1996). *Accounting for management decisions* (3rd ed.). Hemel Hempstead, UK: Prentice Hall Europe.

Atrill, P., & Mclaney, E. (2005). *Management accounting for decision makers* (4th ed.). Pearson education limited.

Banovic, D. (2005). *Evolution and critical evaluation of current budgeting practices* (Published master's thesis). University of Ljubljana, Ljubljana, Slovenia.

Blocher, E., Stout, D., Cokins, G., & Chen, K. (2008).*Cost management: A strategic emphasis* (4th ed.). New York, USA: McGraw-Hill Irwin.

Brigham, E., & Ehrhardt, M. (2008). *Financial management: Theory and practice* (12th ed.). Ohio, USA: Thomson Learning, Inc.

Cam Tu, Doan. (2008). *The roles of management control systems to implement strategic change: The case of industrial service operations*. (Published dissertation). Ecole Polytechnique, Paris, France.

Center for Advancement of Postgraduate Studies- Cairo University. (2005). *Planning and controlling*. Cairo, Egypt: Omran, K. A.

Cheng, T.C.E., & Lai, K. (2009). *Just in time logistics*. Gower Publishing Limited.

Chenhall, R. H. (2003). Management control system design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society, 28*, 127-168. Retrieved from http://www.elsevier.com/locate/aos

Coates, J., Rickwood, C., & Stacey, R. (1996).*Management accounting for strategic and operational control* (1st ed.). London, UK: Butterworth-Heinemann.

Drury, C. (1997). *Management accounting for business decisions*. London, UK: Thomson.

Elder, R., Beasley, M., &Arens, A. (2010). *Auditing and assurance services* (13th ed.). New Jersey, USA: Pearson Prentice Hall.

Emmanuel, C., Otley, D., & Merchant, K. (1990). *Accounting for management control* (2nd ed.). Thomson Learning, Inc.

Ferrell, O.C., Hirt, G., & Ferrell, L. (2006).*Business: A changing world* (5th ed.). McGraw-Hill Irwin.

Garrison, R., Noreen, E., & Brewer, P.(2008).*Managerial accounting* (12th ed.). McGraw-Hill Irwin.

Goosen, K. (2008). *Management accounting: A venture into decision-making*. Micro Business Publications.

Gupta, M. (2011, Nov 4). *Management accounting: Planning and control of the operation*. Retrieved from http://www.articlesbase.com/education-articles/

Harris, R. (2012, June 9). Introduction to decision making, part 1. Retrieved from http://www.vertualsalt.com

Harrison, E. (1999). *The managerial decision-making process* (5th ed.). Boston, USA: Houghton Mifflin Company.

Hilton, R. (2002). *Managerial accounting: Creating value in a dynamic business environment* (5th ed.). McGraw-Hill Irwin.

Hindle, T. (2009, June 29). Activity- based costing. *The Economist*. Retrieved from http://www.economist.com.

Horngren, C., Bhimani, A., Datar, S., & Foster, G.(2002).*Management and cost accounting* (2nd ed.). New Jersey, USA: Pearson Prentice Hall.

Horngren, C., Datar, S., & Foster, G. (2003). *Cost accounting* (11th ed.). USA: Prentice Hall Business Publishing.

Hoyle, D. (2007). *Quality management essentials* (1st ed.). UK: Elsevier Ltd.

Hyvonen, J. (2008). *Linking management accounting and control systems, strategy, information technology, manufacturing technology and organizational performance of the firm in contingency framework* (Published dissertation). University of Oulu, Oulu, Finland.

Jaradat, M. Jawabreh, O. Saleh, M. Abu-Eker, E. (2011) The Extent of applying the Methods of Management Accounting in Planning, Controlling and Pricing in Aqaba Hotels. *European Journal of Economics, Finance and Administrative Sciences* ISSN 1450-2275 Issue 36.

Kaplan, R., & Norton, D. (1996). *The balanced scorecard: translating strategy into action*. USA: Harvard Business Press.

Kariyawasam, U. (2009, August). *Changing role of the management accountant*. Paper presented at the Achievers CIMA Graduation ceremony at BMICH, Sri Lanka.

Kattan, F. Pike, R. Tayles, M. (2005). *Contingency theory of management accounting:The_context of Palestine.* (Unpublished Dissertation), Bethlehem University, Palestine.

Kieso, D., &Weygandt, J. (1995). *Intermediate accounting* (8thed.). New York, USA: John Wiley & Sons, Inc.

Koontz, H., &Weihrich, H. (2007). Essentials of management: An international perspective (7thed.). New Delhi, India: Tata McGraw-Hill.

Low, M. (2011). *Lecture notes: Financial statement analysis* [PowerPoint slides]. Hamilton, New Zealand: University of Waikato.

Lynch, R., & Williamson, R. (1984). *Accounting for management* (3rded.). New Delhi, India: Tata McGraw-Hill.

Maher, M., & Deakin, E. (1994).*Cost accounting* (4thed.). USA: Richard D. Irwin, Inc.

Magd, H. (2010). Quality management standards implementation in Egypt: ISO 9000 perspectives. *Global Business and Management Research: An International Journal*. Vol. 2, No. 1, pp. 57-68.

Marr, B. (n.d.). What is a balanced scorecard? Retrieved from http://www.ap-institute.com/balancedscorecard/html.

Nair, M. (2004).*Essentials of balanced scorecard*. John Wiley & Sons, Inc.

Nevries, P. Weide, G. Kornetzki, T. (2007). *The role of management accountants in the strategic planning process*. Working paper, presented at the EAA Lisbon meeting, WHU-Otto Beisheim school of management.

Ndwiga, N. M. (2011). *The role of management accounting in creating and sustaining competitive advantage: A case study of Equity Bank, Kenya* (Published master's thesis). University of South Africa, South Africa.

Rampersad, H. (2010). *Total quality management*. Berlin, Germany: Springer.

Render, B., Stair,Jr., R, & Hanna, M. (2009). *Quantitative analysis for management* (10thed.). New Delhi, India: PHI Learning Private Limited.

Saunders, M., Lewis, P., &Thornhill, A. (2003). *Research methods for business students* (3rded.). London, UK: Pearson Education.

Shah, H., Malik, A., & Malik, M. (2011). Strategic management accounting: A messiah for management accounting? *Australian Journal of Business and Management Research*, Vol.1, No.4.

Sulaiman, S., Ramli, A., & Mitchell, F. (2008). The dynamics of management accounting in Malaysia: A research note. *Asia-Pacific Management Accounting Journal*, 3 (1). pp. 1-20. Retrieved from http://eprints.ptar.uitm.edu.my/176/

Trenerry, A. (1999). *Principles of internal control* (1st ed.). University of New South Wales Press Ltd.

United Nations Conference on Trade and Development.(2002). *How to prepare your business plan*. Geneva, Switzerland: United Nations.

Vercio, A., & Shoemaker, B. (2007). ABCs of batch processing. *Journal of Accountancy*. (August, 2007). Retrieved from http://www.journalofaccountancy.com/issues/2007/Aug

Weil, R. & Stickney, C. (2006). *Financial accounting: An introduction to concepts, methods, and uses* (12th ed.). Thomson: South West.

Yeshmin, F. Hossan, A. (2011). Significance of management accounting techniques in decision-making: An empirical study on manufacturing organizations in Bangladesh. *World journal of social sciences*, Vol.1 No.1, P. 148-164

WWW. PEX. PS

WWW. netmba. com

المراجع باللغة العربية :

أبومحسن ، أحمد. (2009). *مدى تطبيق أساليب المحاسبة الإدارية الحديثة في البنوك الوطنية العاملة بقطاع غزة.* رسالة ماجستير، الجامعة الإسلامية، غزة ، فلسطين.

الحديدي ، إسراء . (2005). *مدى استخدام أساليب المحاسبة الإدارية في الشركات الصناعية المساهمة الأردنية و تأثيرها على الأداء* . (رسالة ماجستير غير منشورة) ، الجامعة الأردنية ، عمان ، الأردن .

الداعور ، جبر . (2008). أساليب المحاسبة الإدارية المستخدمة في الوحدات الاقتصادية الفلسطينية و محددات استخدامها. مجلة جامعة الأزهر ، غزة . سلسلة العلوم الإنسانية ، المجلد 10 ، العدد 2 . ص 195- 252 .

زعرب ، حمدي . (2007). دراسة مدى استخدام أساليب المحاسبة الإدارية في الشركات المساهمة الصناعية في قطاع غزة (دراسة ميدانية) . *مجلة جامعة الأزهر* ، غزة . سلسلة العلوم الإنسانية ، المجلد 9 العدد 1 . ص 141- 162 .

الشراري ، نزار . (2008). *مدى استخدام أساليب المحاسبة الإدارية في عمليات التخطيط و الرقابة المالية في قطاع الكهرباء الأردني : دراسة ميدانية* . رسالة ماجستير ، جامعة اليرموك ، الأردن.

صباح ، ناريمان . (2008). *واقع استخدام أساليب المحاسبة الإدارية في الشركات الصناعية في قطاع غزة: دراسة ميدانية*. رسالة ماجستير ، الجامعة الإسلامية ، غزة ، فلسطين .

APPENDICES

Appendix 1: List of Referees.

The first draft of the questionnaire had been designed by the researcher, and then it was revised several times. The questionnaire was refereed and refined by professors, doctors, professionals, and statisticians tell we have reached to the final copy which distributed to the study sample community.

Referees

Ass. Prof. Jabr El-Da'ur - Faculty of Commerce, Accounting dep. Al-Azhar University- Gaza.

Ass. Prof. Maher Dergham - Faculty of Commerce, Accounting dep. Islamic University- Gaza.

Ass. Prof. Ra'fat Jouda - Financial Manager, Accounting. Al- Quds Open University- Gaza.

Associated Prof. Samir Safi - Faculty of Commerce, Statistics. Islamic University- Gaza.

Mr. Adly Al-Helo - Financial Manager, ArcMed Hotel, Gaza.

Appendix 2: The questionnaire (Arabic version)

بسم الله الرحمن الرحيم

الموضوع : تعبئة استبانة

السادة / .... المحترمون

السلام عليكم و رحمة الله و بركاته ،،

تحية طيبة و بعد ،،

يقوم الباحث بإجراء دراسة تطبيقية للحصول على درجة الماجستير في المحاسبة و التمويل من الجامعة الإسلامية بغزة بعنوان : " *مدى تطبيق أساليب المحاسبة الإدارية في التخطيط و الرقابة و اتخاذ القرار – دراسة تطبيقية على الشركات المدرجة في بورصة فلسطين و العاملة في قطاع غزة* " لما تشكله هذه الشركات من دعامة أساسية للاقتصاد الوطني .

يرجى من سيادتكم التكرم بالإجابة على أسئلة هذه الاستبانة بالقدر الكافي من الدقة و الموضوعية و الذي سينعكس على نتائج الدراسة و توصياتها ، و إعادتها للباحث في أقرب فرصة ممكنة حتى يتسنى تحليل الإجابات ، مع التأكيد على أن المعلومات التي سنحصل عليها من خلال إجاباتكم ستحظى بالسرية و سوف تستخدم فقط لأغراض البحث العلمي .

شكرا لوقتكم و لحسن تعاونكم ،،

الباحث

حسام صبحي حلس

رقم جوال : 0599780226

بريد إلكتروني : hhilles@hotmail.com

القسم الأول / الأسئلة الشخصية و الخاصة بالشركة المستهدفة :

1) **المسمى الوظيفي** :

 المدير التنفيذي المدير المالي محاسب مدقق داخلي غير ذلك (الرجاء ذكرها) ....

2) **المؤهل العلمي** :

 ماجستير فأعلى بكالوريوس دبلوم ثانوية عامة فما دون

3) **التخصص العلمي** :

 محاسبة إدارة أعمال اقتصاد

 علوم مالية و مصرفية غير ذلك (الرجاء ذكرها) ....

4) **عدد سنوات الخبرة في المسمى الوظيفي الحالي** :

 أقل من 5 سنوات من 5- أقل من 10 سنوات

 من 10- أقل من 15 سنة 15 سنة فأكثر

5) **يتمثل النشاط الرئيس للشركة في مجال** :

 الصناعة الخدمات الاستثمار

 التأمين بنوك و خدمات مصرفية غير ذلك (الرجاء ذكرها) ....

6) **مدة ممارسة الشركة لنشاطها** :

 أقل من 5 سنوات من 5- أقل من 10 سنوات

 من 10- أقل من 15 سنة 15 سنة فأكثر

7) **عدد الموظفين في الشركة** :

 أقل من 20 موظف 21-50 موظف

 51 -100 موظف أكثر من 100 موظف

8) **رأسمال الشركة :**

□ 2 مليون دينار – أقل من 5 مليون دينار □ 5 مليون دينار – أقل من 10 مليون دينار

□10 مليون دينار – أقل من 15 مليون دينار □ 15 مليون دينار فأكثر

9) **درجة المنافسة التي تواجهها الشركة :**

□ كبيرة جدا □ كبيرة □ متوسطة

□ ضعيفة □ لا يوجد منافسة

10) **مدى المعرفة لديكم و الإلمام بأساليب المحاسبة الإدارية المذكورة في الجدول :**

مدى المعرفة / الأسلوب	جيـدة فأكثر	متوسطة	ضعيفة	لا يوجد معرفة
الموازنات				
التكلفة على أساس النشاط ABC				
نظام الإنتاج/الشراء في الوقت المناسب JIT				
إدارة الجودة الشاملة TQM				
بطاقة الأداء المتوازن BSC				
تحليل القوائم المالية FSA				

القسم الثاني / الأسئلة المتعلقة بالدراسة (ثلاثة محاور) :

المحور الأول / مدى تأثير أساليب المحاسبة الإدارية في عملية التخطيط :

يرجى وضع علامة في الخانة الأقرب لقناعتكم و رأيكم :

		موافق بشدة	موافق	موافق بدرجة متوسطة	غير موافق	غير موافق بشدة
1	تستخدم الشركة الموازنات في عملية التخطيط .					
2	تستخدم الشركة الموازنات كجزء من دراسة الجدوى للحصول على موافقة مجلس الإدارة للمشاريع الجديدة .					
3	تشمل عملية التخطيط لديكم تحديد الفئة المستهدفة من الزبائن و كيفية كسبهم .					
4	يتناسب أسلوب الانتاج / الشراء في الوقت المناسب JIT مع طبيعة عمل الشركة .					
5	يتوفر لدى الشركة قواعد إدارة الجودة الشاملة TQM متمثلة في :					
A	- إشراك الموظفين					
B	- العمل بروح الفريق					
C	- الهيكل التنظيمي					
D	- التدرج في التطوير					
E	- الاستمرارية					
6	تستخدم الشركة نسب تحليل السيولة لمعرفة قدرة الشركة على الوفاء بالتزاماتها المالية .					
7	تصنف الشركة أعمالها إلى مجموعات من الأنشطة المتجانسة ليكون كل نشاط بمثابة وعاء تكلفة حسب نظام التكاليف المبني على أساس الأنشطة .					
8	يوجد ترابط و انسجام بين الأهداف الاستراتيجية للشركة و المعايير المطبقة في العمل .					
9	أحد أهداف الشركة الحصول على شهادات ضبط الجودة ISO .					
10	الشركة بحاجة إلى وجود دائرة للمحاسبة الإدارية منفصلة و متكاملة مع الدائرة المالية .					

المحور الثاني / مدى تأثير أساليب المحاسبة الإدارية في عملية الرقابة :

		موافق بشدة	موافق	موافق بدرجة متوسطة	غير موافق	غير موافق بشدة
1	تستخدم الموازنة لقياس انحرافات أداء الشركة من خلال مقارنة التكاليف الفعلية مع التكاليف المعيارية بشكل دوري و تحديد المسؤولية عن حدوث الانحراف .					
2	حجم التكاليف غير المباشرة لديكم يستدعي تطبيق نظام التكلفة على أساس الأنشطة ABC					
3	تقوم الإدارة بوضع المعايير الخاصة بتقييم :					
A	- الربحية					
B	- الحصة السوقية					
C	- الإنتاجية					
D	- الريادة في منتج أو خدمة معينة					
E	- المسؤولية الاجتماعية					
F	- الرضا الوظيفي					
4	توازن الشركة في تقييم أدائها ما بين المعايير المالية و غير المالية (رضا الزبائن ، القدرة على تطوير المنتجات و الخدمات ، تأهيل الموظفين) .					
5	تحرص الشركة بموجب أسلوب بطاقة الأداء المتوازن BSC على ترجمة استراتيجيتها إلى مقاييس للأداء مقبولة و مفهومة لدى الموظفين .					
6	يتمتع رؤساء الدوائر و مسئولي فرق العمل بالصلاحيات و المرونة لقبول بعض الانحرافات عن المعايير المحددة سلفا دون الرجوع للمستويات الإدارية الأعلى .					
7	تستخدم الشركة أدوات التحليل المالي الأفقي و العمودي و تحليل النسب في الرقابة على أداء الشركة و مقارنته مع الشركات المنافسة .					
8	تستخدم الشركة أسلوب (الرقابة قبل التنفيذ) عبر التأكد من مدى دقة وملائمة المعلومات المعتمدة في وضع الخطة ، و تصحيح الأخطاء و الانحرافات السابقة قبل الانتقال للمرحلة التالية .					
9	تحقق الشركة إيرادات أعلى كلما كان تقديم الخدمات أو المنتجات للزبائن بشكل أسرع .					
10	تستخدم الشركة مبدأ (الإدارة بالاستثناء) الذي يركز على نقاط الضعف و العمل على معالجتها					

المحور الثالث / مدى تأثير أساليب المحاسبة الإدارية في عملية اتخاذ القرار :

		موافق بشدة	موافق	موافق بدرجة متوسطة	غير موافق	غير موافق بشدة
1	خلال عملية اتخاذ القرارات ؛ تطلب إدارة الشركة من المحاسبة تقديم مجموعة من البدائل .					
2	تعتبر المعلومات و التقارير التي تقدمها المحاسبة الإدارية موردا أساسيا لعملية اتخاذ القرار .					
3	تستخدم الشركة أساليب التحليل المالي الأفقي و العمودي للقوائم المالية للمساعدة في عمليات اتخاذ القرار .					
4	الكادر الإداري في الشركة لديه فرصة معقولة للمشاركة في بلورة أهداف و رسم سياسات الشركة .					
5	تستخدم الشركة نظام التكاليف المبني على أساس الأنشطة كأداة لاتخاذ قرارات التسعير .					
6	يتمتع رؤساء الدوائر بالتفويض الكافي لاتخاذ القرار المناسب في جميع العمليات الروتينية .					
7	قرارات إدارة النقدية تعتمد بشكل أساسي على الموازنة المالية .					
8	قرارات إدارة الشركة المبنية على تقارير المحاسبة الإدارية أدت إلى :					
A	- زيادة القوة التنافسية للشركة					
B	- تخفيض التكاليف					
C	- زيادة الإنتاجية					
D	- تلبية حاجات الزبائن بشكل أفضل					
9	تعتمد الشركة على الموازنات الرأسمالية في اتخاذ قرارات الاستثمارات طويلة الأجل .					
10	تعتمد إدارة الشركة على عقد المقارنات مع منافسيها من حيث الإجراءات المتبعة وأسلوب وأدوات العمل من أجل اتخاذ القرارات الاستراتيجية .					

يرجي كتابة بريدكم الإلكتروني (حسب رغبتكم) لتزويدكم بالنتائج و التوصيات لاحقا ....

شكرا لحسن تعاونكم ،،

الباحث

Appendix 3: The questionnaire (English version)

<u>Section (1): Information about respondent person and company:</u>

1) **Post title:**
    - Executive manager
    - Financial manager
    - Accountant
    - Internal auditor
    - Others (specify)…………..
2) **Educational attainment:**
    - Masters and above
    - Bachelors
    - Diploma
    - High school or less
3) **Specialization:**
    - Accounting
    - Business administration
    - Economy
    - Banking and finance
    - Others (specify)
4) **Duration of experience in the present post:**
    - Less than 5 years
    - Between 5-9 years
    - Between 10-15 years
    - More than 15 years
5) **Main activities of the company:**
    - Industry
    - Services
    - Investment
    - Insurance
    - Banking and finance services
    - Others (specify)…………..
6) **The company age:**
    - Less than 5 years
    - Between 5-9 years
    - Between 10-15 years
    - More than 15 years
7) **Number of employees in the company:**
    - Less than 20 employees
    - Between 21-50 employees
    - Between 51-100 employees
    - More than 100 employees

8) **The amount of company's capital:**
   - Between 2- less than 5 million Jordanian dinars
   - Between 5- less than 10 million Jordanian dinars
   - Between 10- less than 15 million Jordanian dinars
   - More than 15 million Jordanian dinars
9) **The degree of competition the company faces is:**
   - Very big
   - Big
   - Moderate
   - Weak
   - No competition
10) **The extent of technical knowledge do you have in management accounting techniques listed in the following table:**

Knowledge / Method	**Good**	**Moderate**	**Weak**	**Null** `
Budgets				
Activity based costing (ABC)				
Just-in-time method (JIT)				
Total quality management (TQM)				
Balanced score card (BSC)				
Financial statement analysis (FSA)				

Section (2): The study related questions (three fields):

Field one: Applying management accounting techniques in planning process:

Please sign in the blank that's more closed to your opinion:

		Strongly agree	Agree	Somewhat agree	Dis-agree	Strongly disagree
1	The company uses budgets in planning process.					
2	The company uses feasibility studies which include budgets to accept the directors' approval for new projects.					
3	Your planning process includes determining target clients and how to win their loyalty.					
4	Just in time method matches the nature of the company's activities.					
5	Your company practicing the following TQM principles:					
A	Employee involvement					
B	Working as a team					
C	Organizational structure					
D	Stepwise in development					
E	Consistency					
6	The company uses liquidity ratios to measure its ability to pay maturing obligations.					
7	Your company classifying its activities into harmonizing main groups to create cost pool for each activity.					
8	There is a correlation between the company's strategic objectives and implemented standards.					
9	Receiving ISO certificates is one of your company's objectives.					

10	Your company needs a separated management accounting department integrated with financial department.					

Field two: Applying management accounting techniques in controlling process:

		Strongly agree	**Agree**	**Somewhat agree**	**Dis-agree**	**Strongly disagree**
1	The company uses budgets to measure the gap between actual and planned performance also to determine the responsibility of the variances.					
2	The amount of your indirect costs requires applying ABC method.					
3	The management in your company sets the standards that related to:					
A	Profitability					
B	Market share					
C	Productivity					
D	Maintain brand in some product or service					
E	Social responsibility					
F	Employees' satisfaction					
4	Your company balances between financial and non-financial measures (customer satisfaction, ability to improvement, deliver training to employees)					
5	According to BSC; your company translates its strategy into acceptable and understandable measures amongst staff members.					
6	Team leaders and middle level management have the authority to accept some small variances.					

7	The company uses financial analysis tools such as vertical analysis, horizontal analysis and ratio analysis in controlling and making comparisons with competitors.					
8	The company applies (pre-control) by ensuring that proper and relevant information are set in the plan and all variances were corrected before going forward.					
9	Your revenues go up as you provide products or render services faster.					
10	(Management by exception) principle is implemented in your company which focuses on weaknesses.					

Field three: Applying management accounting techniques in decision-making process:

		Strongly agree	**Agree**	**Somewhat agree**	**Dis-agree**	**Strongly disagree**
1	Financial department is required to provide alternatives to the management during decision-making process.					
2	Management accounting information and reports are considered main resource in decision-making process.					
3	Your company uses vertical and horizontal financial analysis in decision-making process.					
4	Administrative staff in the company has a reasonable opportunity in setting objectives and drawing policies for the company.					

5	The company uses ABC in pricing decisions.					
6	Team leaders and production line managers are free to exercise their judgment in all routine processes.					
7	Cash management decisions based mainly on cash budget.					
8	The following advantages were developed as a result of management accounting reports:					
A	Increased competitive advantage					
B	Cost reduction					
C	Increased productivity					
D	Increased customers' satisfaction					
9	The company's long-run investment decisions depend on capital budgets.					
10	To take strategic decisions; your company make a comparisons with competitors about procedures and policies.					

Please write your E-mail (as you wish) to provide you with results and recommendations later on ……………………..

Thank you for your cooperation,

The researcher