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Target Costing Application in Egypt
An Institutional Perspective

Mohamed Omar El Baradie

Thesis submitted in fulfillment of the degree of
Doctor of Philosophy
PhD

University of Durham
Durham Business School
Durham
United Kingdom

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2008

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DECLARATION

I hereby declare that no portion of the work that appears in this study has been used in support of an application of another degree in qualification to this or any other university or institution of learning.

Dedication

To

Omar

Aida

Rehab, Aya & Nour

Aida...

HERE IS YOUR PHD

ONLY 40 YEARS LATER.

Moustafa & Ahmad

LET US SHARE THIS LIKE WE SHARE EVERYTHING IN LIFE.

Acknowledgements

The PhD, like any other project, takes the contribution of all team members to see it through.

Before and above all, I kneel down in gratitude to God the most merciful and the most compassionate for his generosity, back up, and the gift of serenity that he bestowed on me.

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Last but not least, many thanks to all my students at the Arab Academy for Science & Technology for their wishes and moral support.

Declaration of Rights

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Abstract

The main goal of Management Accounting is to provide routine and non-routine useful information to internal users within the organization (namely managers) for decision making purposes.

The beginning of the twentieth century saw the rise of management accounting as a crucial tool needed for better business management. A period of stagnation followed this revolution, which led some writers to question the validity and usefulness of management accounting as a management tool. Towards the end of the century, management accounting regained its reputation as an essential business instrument through the introduction of a myriad of techniques that better served the increasingly complicated needs of businesses.

These techniques originated in modern / more advanced economies like the United States, United Kingdom, and Japan for example. That was a logical outcome of the huge industrial development that went on in these countries, in addition to the increasing levels of competition.

It was the later that led to the introduction of Target Costing as a market-oriented technique designed to improve a business's ability to better compete.

The fact that the technique originated in Japan, then was adopted in the United States, necessitated that some alterations (fine tuning) be done to it to better fit the new environment within which it was going to operate (keeping in mind the similarities between the two developed countries).

Egypt was chosen because of its increasingly important role in the Middle East, and the stability of its regime. This in turn encouraged foreign enterprises to move into Egypt and establish branches there. These enterprises will "import" their own techniques which in turn will be affected by Egyptian institutions.

This research aims to take this issue further and investigate the application of Target Costing in Egypt -as a developing country- from an institutional point of view. The goal is to unveil the institutional factors that could affect the application of modern management accounting techniques in Egypt.

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Chapter 1

Introduction

1. Introduction & background

"The accounting system is the principal quantitative information system in almost every organization and should provide information for three main purposes:

(1) Internal routine reporting to managers,

(2) Internal non-routine, or special reporting,

(3) External reporting through financial statements. Horngren & Foster (1991)

(Horngren, 1975, Horngren et al., 1993, Drury, 1992) stated that traditionally, management accounting is interested in the first two purposes, the provision of routine and non-routine information to people within the organization, while Financial accounting, on the other hand, is concerned with the third purpose, providing information to parties outside the organization. (Garrison, 1982) added that management accounting emphasizes relevance and flexibility of data, whereas financial accounting has been more oriented towards the historical aspects of reporting, governed by generally accepted accounting principles GAAP, with more stressing precision and putting less weight on non- monetary data.

According to (Horngren et al., 1993), financial accounting is often looked upon as being a cold, objective discipline, whereas management accounting embodies strong behavioural ramifications.

(Horngren, 1989) stated that research in management accounting in the late 1950's focused on advocating better practices like responsibility accounting and relevant costs for special decisions. Then, in the late 1980's, it (management accounting research) shifted to concentrate more on the foundations like information processing in laboratory settings. He, then, went on to ascertain that the recent emergence of production and operations management led to new links and expansions in peoples' perception and comprehension of field management accounting. Because of this emergence, essential questions were raised:

"How can we choose a management accounting system without understanding the product markets, the production technology, and the structure and culture of the organization?"

Influenced by Japanese organizations, (Kaplan, 1983b) pointed to non-financial measures like product leadership, manufacturing flexibility, and delivery performance as important measures of manufacturing performance. He highlighted the need to de-emphasize the focus on simple aggregate short-term financial measures, and instead, to emphasize long-term competitiveness and profitability. The Kaplan (1983), and Johnson and Kaplan (1987) challenges to private sector management accounting practices can be seen as a response to the need to compete successfully in global product markets.

According to Hopper & Armstrong (1991), Traditional management accounting history has been fixated on a search for origins, on the questions of who did what first, and when? Preoccupied with invention, rather than with diffusion and application, writings in this genre have been rich in narrative terms but they have neglected to explore the important linkages between phases of accounting development and their socio-economic context. Given the belief that this perceived deficiency needs to be addressed, the recent marriage between accounting antiquarianism and the doctrines of liberal economics constitutes a definite theoretical advance. Premised on the notion that changes in the forms of business organisation and control systems are driven by searches for efficiency in competitive environments, accounting development is seen as an integral part of this evolutionary process.

2. Research motivation

With the intensification of *Globalization* and *Internationalization*, it became increasingly important to understand how developing countries or transition economies dealt or should deal with this rapid change. According to Youssef (2007), "*Egypt as one of the emerging*

economies underwent several economic phases in its recent history. Especially after 1990, Egypt has passed a series of legislations that promote and encourage potential investors to consider Egypt" (p. 235). The main reason behind that was to introduce and familiarize the economy with the new systems of open market and globalization. To even start to consider competing with the new types of players in the market dictates the use of up-to-date methods and techniques. Most of these methods will be imported from developed business environments i.e. United States, Japan, United Kingdom, etc…

Modern management accounting techniques can not be applied 'as is' directly into the Egyptian business environment. They will have to undergo the process of institutionalization, or in other words, they will have to be fine tuned to better fit in the environment they will be applied within.

If we could identify the institutional factors affecting this transition, it would make it a lot easier to adopt these techniques, and consequently rise to challenge posed by the globalization pressures. Target costing, as a modern management accounting technique, is studied as a sample of these methods.

Furthermore, Most of the studies that the researcher reviewed investigated target costing -as a modern management accounting technique- from an application/non application point of view. They measured the level of utilization of the technique with no regard to the institutional elements that could affect this application. They broke down target costing to its main components and determined to which extent each component was applied and how successful the application was.

3. Research focus

This research aims to answer the following main question:

"What are the institutional factors that could affect the applicability of target costing as a contemporary management accounting concept in the current Egyptian business environment?"

While investigating this issue, several hypotheses will also be investigated. These are:

- "In Egypt, organizations either are not familiar with or would not apply Target Costing as an example of new management accounting techniques.
- The organization's external stakeholders will influence the application of target costing (as a new management accounting technique) within the organization.
- The current management accounting techniques will affect the application of target costing (as a new management accounting technique) within the organization.
- Management accounting tasks and perception of management accounting change will have an effect on the application of target costing (as a new management accounting technique) within the organization.
- Coordination & teamwork will influence the application of target costing (as a new management accounting technique) within the organization.
- External factors surrounding the organization will affect the application of target costing (as a new management accounting technique) within the organization.
- Training levels will influence the application of target costing (as a new management accounting technique) within the organization.
- Personal skills are important in determining the success of the application of target costing (as a new management accounting technique) within the organization.

- Informal/personal factors will affect the application of target costing (as a new management accounting technique) within the organization.
- The decision making processes will affect the application of target costing (as a new management accounting technique) within the organization.
- Environmental surroundings will have an effect on the application of target costing (as a new management accounting technique) within the organization.
- The organizational culture will influence the application of target costing (as a new management accounting technique) within the organization.
- Current pricing methods will have an effect on the application of target costing (as a new management accounting technique) within the organization.

4. Thesis structure

This thesis will be divided into ten chapters including this introduction.

Following this chapter, chapter two will provide an overview of management accounting as a discipline. It will start by providing a brief comparison between financial accounting, and management accounting. It will then address the management accounting relevance lost argument. The main reason is to point out the significance of modern management accounting techniques and their importance as continuous improvement business tools. This chapter will then attempt to discuss the scopes of both management and cost accounting distinguishing between accounting for management decisions and accounting for management control. Finally, it will discuss management/cost accounting techniques and cost assignment methods introducing Activity Based Costing as a viable solution to overcome the drawbacks of traditional costing.

In chapter three, the researcher will attempt to discuss the history and drivers of change in management accounting. The chapter will start by elaborating on the history of management

accounting practices. Then it will go on to discuss the change that occurred on these practices and its drivers, causes, and consequences. The relationship between culture and management accounting practices will be discussed with examples from many countries especially south East Asia. The next step is to discuss the consequence of national culture and clarify the type of relationship between culture, management accounting, and change. Finally, the chapter will discuss the application of management accounting practices in developing countries and transition economies in order to make the situation in Egypt (as a developing country) as clear as possible.

Chapter four will mainly introduce and discuss Target Costing as a modern management accounting technique. The chapter will elaborate on the Target Costing principles, goals, processes, strategy, implementation, focus, and advantages. Finally, this chapter will discuss some of the concerns related to Target Costing as technique used for strategic management/cost planning technique.

The theoretical framework adopted by this research is discussed in chapter five. In this chapter, the researcher will introduce Old Institutional Economics and New Institutional Sociology as a hybrid framework encompassing the research. The ultimate goal of this chapter is to provide the closest and clearest picture of the process of adoption (or the resistance to adoption) of newer/innovative systems and practices in specific organizational settings, and/or changes in the role of management accounting in a specific environment.

Egypt as a context of the research is discussed in chapter six. It provides a detailed review of the history, strategy, politics, industry, and economic development that occurred and is occurring in Egypt. The regulatory framework of the financial system in Egypt will be discussed, and then Egypt as a developing country will be connected with the conceptual framework (Institutional Economics). The following part will discuss Egypt's principal

industrial competitive strengths and market access programs. The research setting (Borg Al Arab city) will then be introduced and described.

Chapter seven introduces the methodology and methods adopted in this research. The chosen methods and research design are introduced. The ontological and epistemological points of view are discussed. Inductive and deductive researches are touched upon, and then the link between the methodological foundations and institutional economics are introduced. Data collection techniques varied between questionnaires (quantitative) and interviews (qualitative). This triangulation intends to overcome the drawbacks of using a single technique or method, and complement both techniques used. The process of preparing the research instruments and the articulation of the central argument of the research are then discussed. The main research question and supporting hypothesis are clearly stated. The research design section follows with a brief explanation of the linkage between the research theoretical framework and the design chosen. The next section discusses Borg Al Arab city from the geographic and demographic point of view. Sampling techniques are discussed before the research method and strategy is introduced. This chapter will then discuss the reasons behind the triangulation technique utilized along with the questionnaire design.

Chapter eight illustrates the steps followed in analyzing the data gathered during the empirical phase of the research. It explains the data/construct sources, and then it measures the reliability of the data. The statistical Package for social sciences (SPSS) is used to analyze the collected data and the specific tests undertaken are discussed along with the results reached.

Triangulation is an approach to data analysis that synthesizes data from multiple sources. Triangulation seeks to quickly examine existing data to strengthen interpretations and improve policy and programs based on the available evidence. By examining information collected by different methods, by different groups and in different populations, findings can

be corroborated across data sets, reducing the impact of potential biases that can exist in a single study. Triangulation combines information from quantitative and qualitative studies, incorporates prevention and care program data, and makes use of expert judgment. Triangulation can answer questions on risk groups, program effectiveness, policy and budget planning, and the state of the epidemic in a changing environment. Triangulation methodology provides a powerful tool when a rapid response is needed, or when good data do not exist to answer a specific question. Triangulation can be used when the collection of new data is not feasible or cost-effective (California, 2008).

To complement the findings of the statistical analysis, interviews will be utilized. Chapter nine discusses the process the interviews went through, and the analysis of the interviews' outcome.

Finally, chapter ten combines the results of the two previous chapters. It attempts to compare both quantitative and qualitative results in order to find the similarities (if they existed) and the differences between the two types of findings. The main goal of this chapter is to reach the results of the research and produce the proper recommendations along with any ideas for further research.

Chapter 2

Management Accounting

&

Strategic Management Accounting

1. Introduction:

This chapter aims to provide an overview of management accounting. It starts by presenting a brief comparison between Financial and Management Accounting. Then, the chapter discusses the history of management accounting and its relevance. It attempts to show the importance of current management accounting techniques and their tight connection to continuous improvement and renovation.

Then, it attempts to compare and contrast Management and Cost accounting, and show that - generally- the scope of management accounting is wider than that of Cost accounting. The distinction between accounting for management decisions, and accounting for management control is then attempted showing the goal of management control.

Subsequently, accounting and cost management are discussed, followed by another discussion of management/cost accounting techniques, and cost assignment methods.

Activity based costing is then introduced as a viable solution to overcome the drawbacks of traditional costing.

2. Cost/management accounting: an overview

The American Accounting Association defined Accounting as

"The process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information" (Everaert, 1999) (p. 67)

(Horngren and Foster, 1991) stated that:

The accounting system is the principal quantitative information system in almost every organization and should provide information for three main purposes:

(1) Internal routine reporting to managers with the purpose of providing information and influencing behaviour regarding cost management and the planning and controlling of operations.

(2) Internal non-routine, or special reporting with the purpose of aiding managers to take strategic and tactical decisions on matters such as pricing products and/or services, choosing which products to emphasize or drop, investing in equipment, and formulating overall policies and long-range plans.

(3) External reporting through financial statements to investors, government authorities, and other outside parties"

(Horngren, 1975, Horngren et al., 1993, Drury, 1992) stated that traditionally, management accounting is interested in the first two purposes, the provision of routine and non-routine information to people within the organization, while Financial accounting, on the other hand, is concerned with the third purpose, providing information to parties outside the organization. (Garrison, 1982) added that management accounting emphasizes relevance and flexibility of data, whereas financial accounting has been more oriented towards the historical aspects of reporting, governed by generally accepted accounting principles GAAP, with more stressing precision and putting less weight on non- monetary data.

According to (Horngren et al., 1993), financial accounting is often looked upon as being a cold, objective discipline, whereas management accounting embodies strong behavioural ramifications.

(Horngren, 1989) stated that research in management accounting in the late 1950's focused on advocating better practices like responsibility accounting and relevant costs for special decisions. Then, in the late 1980's, it (management accounting research) shifted to concentrate more on the foundations like information processing in labouratory settings. He, then, went on to ascertain that the recent emergence of production and operations management led to new links and expansions in peoples' perception and comprehension of field management accounting. Because of this emergence, essential questions were raised: "How can we choose an accounting system without understanding the product markets, the

production technology, and the structure and culture of the organization?" Table 2.1 illustrates a comparison between the two eras.

1950s-1960s		**1970s-1980s**	
Relevance (1) TO	What costs are relevant for an individual manager making single-person decisions?	Motivation (1) TO	Given multi-person contexts, what are the fundamental purposes of accounting information? Why is accounting demanded?
Motivation (2)	Given (1), what are the implications for decisions in a multi-person context?	Relevance (2)	Given the foundations in (1), what types of accounting data should be gathered?
Single person Single period Zero cost of information Easy access to information Certainty Profit maximization Tools: for what problems can we use them?		Multi-person Multi-period Costly information Asymmetric information across individuals Uncertainty Utility maximization Problems: what tools should we use?	
Did the manager use the right decision model?		Did the manager take actions that maximize the probability of attaining the top management's or owners' goals?	

Table 2.1 Adapted from: (Horngren, 1989)

2.1 Management accounting relevance

(Hiromoto, 1991) stated that current management accounting systems are designed to support continuous innovation, which is a new common theme of management accounting systems design. The elements of that new theme are: a behaviour influencing focus, market-driven management, and a dynamic/team-oriented approach. Management accounting must build a constant awareness of strategic messages in every part of the organization, assuring that employees will be involved in unified innovative activities and thus facilitating the enactment of corporate strategies.

The relevance of accounting information for decisions or choosing among alternative courses of action is declining. Decisions always require a variety of input data -of which accounting numbers are only one part. Inputs other than accounting data are becoming increasingly important. Hiromoto asked his readers to think of the firm as an interface between a

technology and its markets; and to leave out other elements that have effects on corporate activity such as culture, social practices, legal institutions, and education systems. In doing so, companies could get a better perspective on their markets and be in a better position to compete in the current –increasingly difficult- business environment. To implement market driven management accounting across the organization, top management should emphasize - to employees- the importance of keeping a close relationship to customers. Also, structural changes have to be made to accomplish the required market driven management. Figure 2.1 illustrates the difference between market-driven and technology-driven cost management systems.

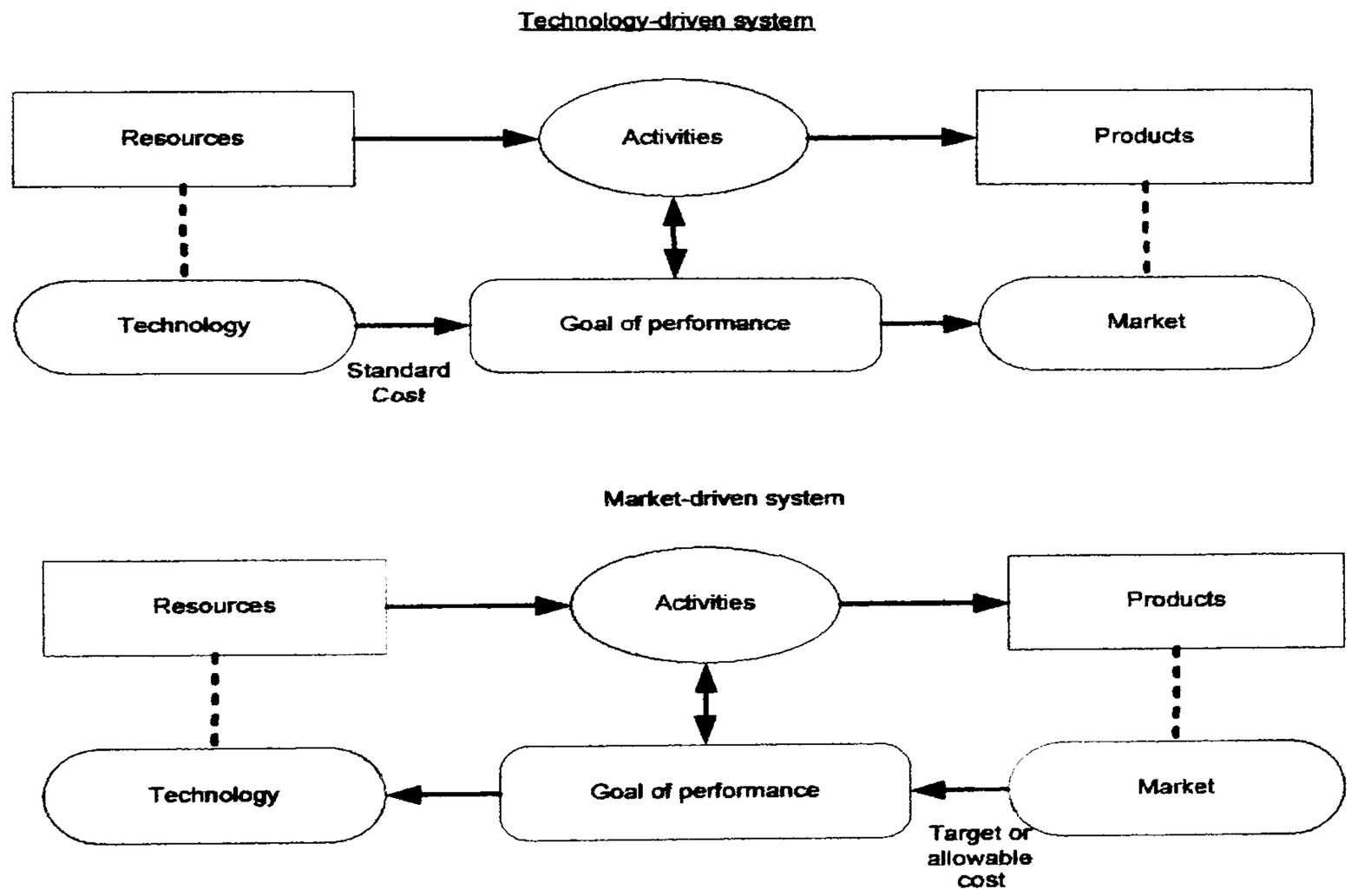

Figure 2.1: Market-driven vs. technology-driven cost management systems

Adapted from (Hiromoto, 1991)

2.2 The challenge to management accounting

Influenced by Japanese organizations, (Kaplan, 1983b) pointed to non-financial measures like product leadership, manufacturing flexibility, and delivery performance as important measures of manufacturing performance. He highlighted the need to de-emphasize the focus on simple aggregate short-term financial measures, and instead, to emphasize long-term

competitiveness and profitability. The Kaplan (1983), and Johnson and Kaplan (1987) challenges to private sector management accounting practices can be seen as a response to the need to compete successfully in global product markets.

2.3 Cost vs. Management Accounting

There is some confusion in terminology between **Cost Accounting** and **Management Accounting**. Some authors define cost accounting in the same way as management accounting. (Horngren and Foster, 1991), and (Drury, 1992, Drury, 2004) asserted that cost accounting is only a part of management accounting. Cost accountants' main duty is to collect cost information for stock valuation and to determine the cost of goods sold, to meet the requirements of external reporting. With the increasing use of cost information in decision-making in all functional areas of a business, the role of the cost accountants has expanded to that of management accountants.

(Montgomery, 1979) stated that management accountants provide cost data for many more activities than financial accountants. Often, cost information is provided to engineers to assist in product design decisions, to marketing for use in pricing and marketing strategy decisions, to personnel to provide the foundation for wage, salary structures and wage negotiations with unions, to operations management for use in the planning and control of current operations, and to top management for use in long-range planning.

Consequently, management accounting involves routine and non-routine reporting to managers. The American Institute of Management Accountants defines management accounting as "*the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control within an organization and to assure appropriate use of and accountability for its resources*" (Atkinson et al., 1995). (Kaplan and Atkinson, 1989) were more specific about the two purposes of management accounting. They stated

that "*management accounting is a system that collects, classifies, summarizes, analyses and reports information that will assist managers in their decision-making and in their control activities*".

Similarly, (Drury, 1992) considered the goal of a management accounting system as to provide information for management activities such as decision-making, planning, and control. Management accounting for the first purpose (decision-making) is substituted with accounting for management decisions, whereas management accounting for the second purpose (planning and control activities) is substituted with accounting for management control. Traditionally, accounting for management decisions deals with topics such as product costing, process costing, job order costing, marginal costing, cost-volume-profit analysis, profitability analysis, product-mix analysis, standard costing, variance analysis and capital investment justification. Although some topics have many common characteristics, accounting for management control is more likely to involve topics such as responsibility structure, budgeting, performance measurement, rewarding managerial performance and transfer pricing.

2.4 Accounting and Management Control

As previously mentioned accounting for management control involves the provision of accounting information that assists managers in their planning and control activities. (Emmanuel et al., 1990) (Chapter 1) defined planning as "*the process of setting objectives and the means of their attainment*", and control as "*the process of ensuring that plans are achieved*", and so, planning activities provide answers to the questions: "What is desired?" and "When and how is it going to be accomplished?", whereas control activities ensure the implementation of those plans. Both planning and control activities are necessary to achieve management control in an organization. (Anthony and Govindarajan, 1995) (Chapter 1) defined management control as "*the process by which managers influence other members of*

the organization to implement the organization's strategies". (Emmanuel et al., 1990) defined management control as "*the process by which managers attempt to ensure that the organization adapts successfully to its changing environment, making organization survival the overall objective*". (Lowe, 1971) (p. 3) provided a similar definition. He stated that "*Management control is a system of organizational information seeking and gathering, accountability and feedback designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behaviour of its employees is measured by reference to a set of operational sub-goals (which conform with overall objectives), so that the discrepancy between the two can be reconciled and corrected*". To (Ansari and BELL, 1997) the major activities in management control are: (1) guiding behaviours through goals, objectives, missions and/or standards; (2) facilitating behaviours by sharing and communicating information that members need about each other's behaviours; (3) evaluating behaviours as they occur to ensure they are consistent with desired behaviours; and (4) motivating behaviours by providing the necessary inducements for members to stay within the collective structure. (Emmanuel et al., 1990) remarked that people may fail to act in an organization's best interest –and therefore the need for management control- for any of three basic reasons. The first is *lack of direction*, because people do not always understand what is expected of them. The second is *lack of motivation*. Some people know what is expected of them, but are not interested in behaving accordingly because their individual incentives are not adequate to motivate them. The third reason is *lack of ability*, either general or personal. For instance, lack of ability exists when job contents are not properly designed, or involve complex or demanding activities that no ordinary employee would be expected to perform. Consequently, management control is necessary to guard against undesirable performance and to encourage desirable actions leading to the implementation of the strategies and the survival of the firm. A management accounting system of setting objectives, measuring

performance and evaluating performance reduces the chances of lack of direction. For instance, by using budgets (profit, revenue or cost) for each sub-unit of the organization or by using operational performance measures such as waste reduction, machine-efficiency, etc. the overall organization goal is quantified and broken down, so that employees know exactly what is expected of them. The ideal situation is a situation of perfect goal congruence, as mentioned by (Anthony and Govindarajan, 1995). This means that employees seeking personal goals would also be helping to attain the organization's goals. The development of optimum compensation plans and other incentive schemes are important considerations in promoting goal congruence. (Horngren, 1975) wondered about the benefits of a management accounting system (used for control) as to whether it encourages managers, when working in their own best interests, to act at the same time in harmony with the overall objectives of the firm. Figure 2.2 presents a framework to realize management control.

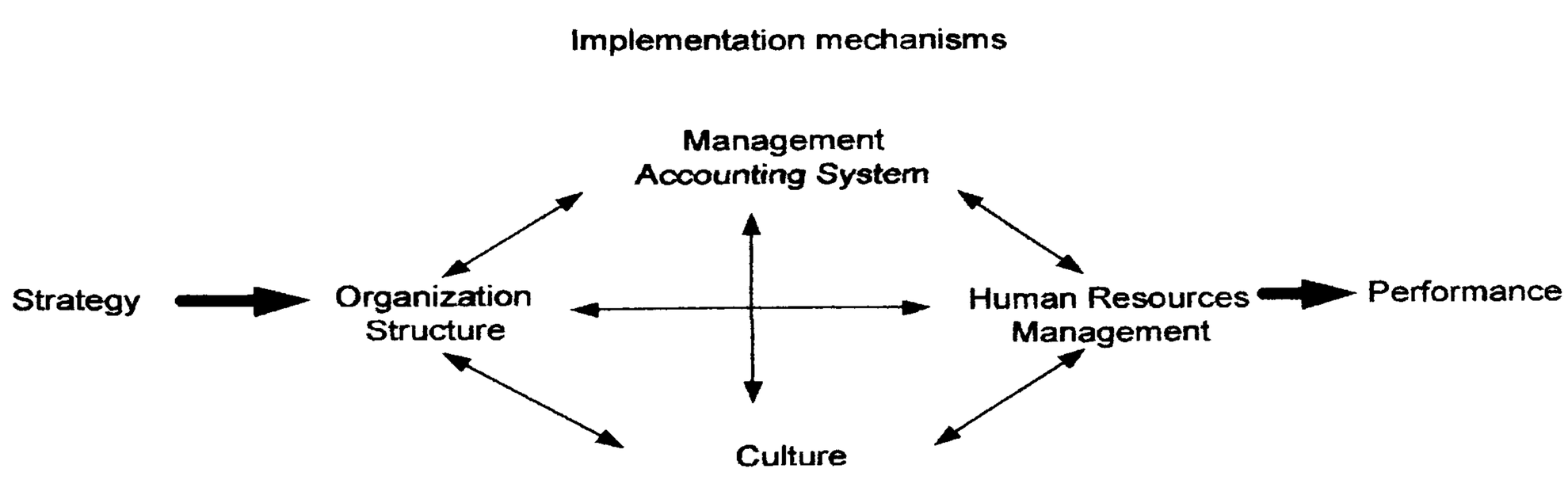

Figure 2.2: Framework to realize management control. Adapted from Anthony & Govindarajan (1995)

In conclusion, a good management accounting system has a central role to play in establishing effective management control. As (Emmanuel et al., 1990) asserted, it is often the only source of quantitative data that combines the results of all activities of different parts of the enterprise. Nevertheless, an effective management accounting system is just one of the tools managers use to realize management control –as shown in figure 2.2. Following

(Anthony and Govindarajan, 1995), strategies also are implemented through adequate organizational structure, effective human resources management and, appropriate organizational culture. An adequate organization structure guides the actions of the members by specifying the structure, roles, reporting relationships, and responsibilities among them, whereas an effective human resources management system affects their actions through selection, training, evaluation, promotion, etc... . Culture, as described by Hofstede, refers to the set of common beliefs, attitudes, and norms that guide, explicitly or implicitly, the behaviour of people in performing their tasks. Hence, the provision of management accounting information is a necessary, but not sufficient condition for effective management control. It is believed, as (Emmanuel et al., 1990) stated, that the absence of such information, or perhaps worse, the provision of inadequate or misleading information, is a powerful disadvantage to effective organizational functioning.

2.5 Accounting and Cost Management

Recently, the task of assisting managers in their control activities emerged as a new role for management accounting systems. This new role involves the provision of accounting information to influence organization members to realize cost management, i.e. to pursue every possible cost reduction opportunity. Cost management is understood in different ways in literature. To (McIlhattan, 1992) cost management is "*the skiful handling or directing of costs*". (Horngren et al., 1997) defined cost management as "*the set of actions that managers take to satisfy customers while continuously reducing and controlling costs*". Similarly, (Cooper, 1995) (p. 5) defined cost management as "*the creation of pressure to reduce and control costs*". In this perspective, (Howell and Sakurai, 1992) spoke of a cost down ideology as a synonym for cost management. (Kato, 1993) added that in the current ever changing environment, pursuing every possible cost reduction opportunity is surely a good strategy. He then went on to warn that it is essential to avoid reducing costs without regard for the quality,

functions and characteristics of the product, from the customers' point of view. Hence, cost management requires that managers actively look for cost reduction opportunities, while enhancing or keeping the value of the product perceived by the customers at the same level. Furthermore, (Cooper, 1995) argued that cost management needs to include all aspects of producing and delivering the product; i.e. from the supply of purchased parts, and through the design and manufacturing of these products. So, cost management should be intrinsic in each stage of a product's life cycle, i.e. during the development, manufacturing, distribution of a new product, and during the service lifetime of a product. (Susman, 1989) argued that reducing costs at each stage individually does not necessarily lead to cost reduction for the product as a whole. For instance, reducing costs on testing a new product might cause much higher costs during the manufacturing stage, due to manufacturing problems. That's why (Shields and Young, 1991) preferred to use the term "Product Life-Cycle Cost Management", thus stressing the product life cycle content of cost management. Hence, cost management should focus on reducing the *total* costs of a product, throughout its entire life cycle.

Furthermore, to (Shields and Young, 1991), cost management should not be limited to the discretion of the producer alone, since customers are becoming more sensitive to after-sale costs in addition to the price. According to the same researchers, modern cost management should -not only- focus on reducing the costs the producer incurs for the product (i.e. what Shields & Young call the life-cycle costs), but should also focus on reducing the costs that consumers incur after sale, such as the costs of installation, operation, maintenance, and disposal. They call this total of costs incurred by the producer as well as the consumer, the "Product Whole Life Cost". Consequently, they argued that the whole life costs should be the primary focus of cost management.

3. Examples of old management accounting techniques

According to (Taylor, 2000), cost accounting has come under serious attack during the past decade. This attack was founded on the grounds that traditional cost allocating approaches are loaded with a considerable amount of uncertainty and contained substantial errors. These errors can lead to misguided decisions dealing with issues like pricing, outsourcing, capacity planning, and profitability analysis for various product lines and other segments of business activity.

Taylor goes on to state that such distortions stem from the fact that cost structures in many companies have undergone intense change. Rising overhead and other indirect or *support* costs -complemented by a major reduction in direct labour costs as a proportion of total product cost- were the outcome of the increasing degree of skilled labour, automation, and computerization in manufacturing and other areas of business activity. Workers, currently called "knowledge workers," are busy overseeing computerized machines and dealing with the production process through computer terminals located all over their plants. At the same time, other support activities outside the boundaries of the factory, such as quality control, supply chain management, information technology, customer service, engineering, and new product development, have also risen significantly and become more complex, leading to a further increase in the level of indirect costs. This, in turn, led to fewer variable direct costs and increasing pools of fixed indirect costs. This shift necessitates a far greater level of indirect-cost assignment and raises the potential for significant distortion in cost assignment under traditional cost accounting techniques which -most likely- will fail to reflect these changes in cost structure.

The problem is worsened by the increase in cost objects (which refers to anything that decision makers would like to cost. E.g. products, departments, activities, clients, regions, etc...). Recent manufacturing technologies enable companies to produce customized products

more readily, resulting in an increasing wealth of products and services with rapidly shrinking life cycles. In 1999 Michelin (the Tire manufacturer) started selling colour-streaked tires and, commencing in the following May, shoppers could log onto the company's website and order custom-colour tires. This capability has expanded both volume and product diversity across a wide range of products and services. Product costs differ materially depending on volume or lot sizes, and upon the degree of complexity associated with the production of different products. Also products and services are being delivered through multiple and, often, technologically new channels of distribution, like the internet, to different market and customer segments. To achieve competitive advantage, companies presently place greater emphasis on determining not only product profitability but also profits relating to different channels, sales regions, and clients, which in turn amplifies the impact of cost allocation methods. The growing concern over cost assignment is related to the new era of global markets' expansion and the unusual advances in information technology. With competition among business enterprises increasing and becoming more intense, customers steadily raising their expectations, businesses devoting careful attention to the quality of products and services they provide and to developing strategies for competitive advantage, and ever thinning profit margins, costing accuracy becomes very critical. Mises (1949) apparently viewed the discretionary assignment of overhead as more or less harmless, but the drastic change in cost structures and the array of cost objects paint quite a different picture today.

The attack on the traditional approach to cost assignment is based on the valid argument that in two critical respects it is totally out of touch with reality in many businesses today. First, direct labour is typically an insignificant factor in the total cost of a product, often less than 10 percent of the total cost. Second, direct labour is not a causal cost driver for most, if not all, manufacturing overhead (Taylor, 2000). An example of the discrepancy is that machine

setups and product inspections are not correlated with direct labour hours. With the steadily increasing cost of overhead, generated largely from increasing automation, indirect fixed labour, and computerization, in addition to the insignificant level of direct labour cost, the traditional method creates unreasonable overhead rates, like 1,000 % of direct labour cost. As a result, managers are motivated to focus on reducing direct labour cost where small savings can have a huge impact on cost allocations and product costs rather than focusing on cutting the rapidly increasing overhead costs.

(Johnson and Kaplan, 1987) speculated that during the period between 1925 and the 1980's, more accurate and strategically oriented costing failed to emerge due to several factors coming together: (a) the prohibitive cost of tracing costs more accurately in the early years; (b) the fact that -early on- direct labour was a substantial part of total product manufacturing cost and assigning overhead costs based on direct labour provided acceptable accuracy in product costing meanwhile overhead costs were less prominent before the rise in automation and computerization over the past two decades; (c) from the early 1900s the dominance of financial accounting and the public auditing profession in reporting to outsiders -virtually equating cost accounting to determining the cost of inventory and cost of goods sold for disclosure in balance sheets and income statements; and (d) the academic agreement in defining the purpose of cost accounting "in terms of valuing cost of goods sold and inventories for financial reports, not for managerial decisions and control". This acquiescence has been manifested in both simplistic textbooks and other published writings—despite insightful works still applicable today by a few academics, such as J.M. Clark in 1920s, Ronald Coase in the 1930s, and William Vatter in the 1940s, which unfortunately did not get the proper attention at the time. And so the question is raised: "What have management accounting practitioners been doing for the past sixty years?" Johnson and Kaplan regrettably

answer their own question: between 1925 and 1980, "virtually no new ideas have affected the design and use of cost management systems" (p. 176).

From a different point of view, Kaplan and Johnson's view of a profession stagnating in the face of global competition, increasingly complex production processes, and dynamic innovative change in business management has been criticized by (Bromwich, 1990). In spite of acknowledging that there is a need to improve the flow of non-financial information, Bromwich argued that the behaviour of management accountants might change, in response to these circumstances even if the techniques that they employ do not. In his view, management accountants need to think and act strategically, to evaluate products from the customers' point of view and to estimate product costs in relation to those of competitors.

3.1 Budgeting

"*The traditional process of planning and budgeting has long been accepted by the business world as a necessary evil, a laborious yet obligatory element of maintaining the corporate structure*". McKenna (2003) (p. 53)

"*A fixture of corporate life since the 19th century, the traditional budget is, of course, that periodic exercise by which organizations determine their upcoming operating expenses and forecast income*". Heynes & Sutcliffe (2002) (p. 63)

For many years the traditional budgeting - as a top down approach initiated by the corporate head office who issues budget packs to the operational units for completion, usually on an annual basis- process has been viewed as a convenient and effective tool for senior management to prevent improper spending and abuse of resource within any organization.

3.2 Activity Based Costing

In an effort to overcome the drawbacks of traditional costing, Activity Based Costing (ABC) was developed.

Activity-based costing defines the relationship between costs and the objects to which costs should be assigned. Unlike traditional cost accounting, which sees cost objects like products and departments as the direct cause of the resources' consumption, ABC holds that costs, except for materials costs (direct), are caused by the *activities* that constitute the business operations. Cost objects necessitate the performance of certain activities. It is the activities that consume the resources. By determining the costs of different activities as a first stage in the costing process, objects can ultimately be assigned costs according to their demands on activities. Separate pre-determined activity rates are thus used rather than the vague overhead rates of traditional cost allocation.

ABC is fundamentally different from traditional costing because it insists on an explicit cause-and-effect connection between the various activities and costs (or consumption of resources) as a first step. The second step is assigning costs to objects through the use of cost drivers to link objects to activities. An activity cost driver is "*a quantitative measure of the output of an activity*" (Kaplan and Cooper, 1998). To illustrate, consider the activity of setting up a machine to process different batches of materials. The activity cost driver would be setups or setup hours. Assume that total setup cost is £44,800 for a specific period of production, and that the projected total number of setups is £70, then an activity rate of £640 (44,800/70) per setup would be used to cost different products depending on the number of setups required. Obviously, products manufactured in smaller lot sizes will be assigned excessively more of the setup cost than those produced in large runs.

3.2.1 Advantages of ABC

In real life research within businesses, the following findings were established:

(Swenson, 1998) stated that ABC not only improved cost accuracy, but it also revealed opportunities for cost reduction.

(Kaplan et al., 1997) stated that ABC can be used in transfer pricing where real market price data are not available and other traditional methods are considered unacceptable.

(Coburn et al., 1997), found that ABC models devised for special occasions are useful tools in capital budgeting.

(Kaplan and Cooper, 1998) ascertained that, using ABC, companies can determine more accurately the costs of serving different customers who make varying demands on the companies' products.

3.2.2 ABC & Target Costing (TC)

As will be discussed more in a later part, another new approach, "target costing," which originated in Japan in the 1960s, has –since the mid 1990's- received increasing attention from American companies in reaching decisions regarding new products.

Target costing is an important strategic cost management topic. The competitive business environment requires firms to produce products with the quality and functionality demanded by customers while at the same time selling them for prices largely determined by the market. Conventional cost management and cost plus pricing strategies are not very effective in this new environment (Castellano and Young, 2003a).

According to (Taylor, 2000), Target costing is integrated into the ABC paradigm as a proactive means of effective cost management. Unlike the traditional approach to pricing, target costing approaches the costing function in a fundamentally different way. Rather than moving from cost to price, target costing starts with the expected market price and works backwards to determine the allowable cost. Thus, for a new product under consideration, the

target cost equals the anticipated selling price, derived from market research and analysis of competitors' products, less the desired profit per unit.

According to (Ansari and BELL, 1997) there are two critical reasons for the development of target costing. First, from the viewpoint of many companies, the anticipated market price is taken as given due to intense competition and the amount that customers are expected to be willing to pay for the new product. The company cannot simply calculate the costs, add in a profit margin, and then expect to sell the product at that desired price. Second, is a critical point regarding the nature of costs today: a large proportion of the ultimate total cost of a product is committed or "locked in" at the design stage: "Target costing focuses on product design because most costs, nearly 70–80 percent, are committed at the design stage, while only 10–20 percent of the costs are incurred at this stage". In other words, the opportunity to control costs is far greater before undertaking the manufacturing of the product than once production is underway and all components and processes have been set.

(Swenson, 1998) declared that Activity-based costing (ABC) is a key tool of target costing. Its underlying activity analysis applied across the entire value chain and beyond to suppliers, can detect those activities that add no value to the product or service and consequently they can be eliminated. Cost estimation is facilitated through cost tracing using the cause-and-effect linkage of activity costs to the product.

4 Strategic cost management

4.1 Strategy

Whenever *Strategy* is used in modern management/organizational literature, it seems to be hard to define. As (Mintzberg, 1988) illustrates it, he feels *that it defies a single definition*. When attempting to define strategy, he used different words stemming from many backgrounds. He used plan, pattern, position, and perspective. In his own words, he said that

"plan introduces the notion of intention, pattern focuses on action, position introduces context, and perspective reminds us that strategy is nothing more than a concept". (Chapter 3)

Clarke & Tagoe (2002) said that strategic thinking is simply the ability to adapt the organization so that it can prosper in its future environment. Thus *strategy is about being different; it means performing different activities from competitors, or performing similar activities to rivals in different ways.*

Another way of looking at strategy is to differentiate between strategies and tactics (Anthony, 1988, Pearce and Robinson, 1991, Stahl and Grigsby, 1991). Strategies relate to the *larger picture* or *the important things* as per (Mintzberg, 1988), while tactics are concerned with the means to achieving the strategies. Moreover, tactics tend to be more concerned with matters pertaining to efficiency, while strategies tend to relate to effectiveness matters.

(Rumelt, 1979, Terreberry, 1968) mentioned that "*One manager's strategies can be another's tactics*" depending on one's perspective.

When *time* is introduced as a dimension, it casts the light on yet another angle of the strategy/tactic comparison. A tactical decision taken today could be a source of strategic advantage in the future, and therefore the uncertainty associated with classifying a managerial decision as strategic vs. tactical becomes evident.

(Chandler, 1962) (Chapter 2) describes strategy as "*the determination of the basic long-term goals and objectives of an enterprise, the adoption of courses of action, and the allocation of resources necessary for carrying out these goals*". In this definition we can notice the long-term and future-oriented aspects of strategy.

(Zabriskie and Huellmantel, 1991) have a similar point of view. They see strategy as "concerned with the selection of future markets that can provide growth, while operational activities are concerned with managing resources already invested in today's markets".

When *competition* is introduced as a dimension, strategy would be viewed a little differently. (Porter, 1980), 1985) sees competitive strategy as concerned with "*creating and maintaining a competitive advantage in each and every area of business*".

Similarly, (Ohmae, 1982) (Chapter 4) comments: "*Business strategy is all about competitive advantage. Without competitors there would be no need for strategy, for the sole purpose of strategic management is to enable the company to gain, as effectively as possible, a sustainable edge over its competitors*".

Stahl & Grigsby (1991) also see strategy as: "*The set of managerial decisions that relates the organization to its environment, guides internal activities, and determines the long-term performance of the organization*".

Price is yet another dimension that has to be taken into consideration. As (Simmonds, 1982) (p. 210) stated, "*price changes often have traceable effects beyond their immediate impact on the profits of the firm taking the action. The ultimate effect of any change will not always be easy to predict with accuracy. It would be short-sighted of managements contemplating price action not to consider the outcome of at least one stage of competitor reaction*". (Fisher, 1998) - As referenced by Simmonds- stated that

"*... No business man assumes either that his rival's output or price will remain constant any more than a chess player assumes that his opponent will not interfere with his effort to capture a knight. On the contrary, his whole thought is to forecast what move the rival will make in response to his own*".

Simmonds goes on to assert that costs provide the point of departure for strategic pricing decisions because more detailed information is available concerning them than for such factors as demand conditions, competitors' costs, and competitive sales and price tactics. Using this information, and once a price is suggested, then, the next logical step is to revise

the estimate in light of the expected sales volume, quality and sales programs of competitors, and similar demand considerations.

4.2 Strategic Cost Analysis

As Pearson (1997) (p. 26) stated, "*Strategic Cost Analysis is a phrase to describe an alignment of ideas from marketing, strategy, and accounting. This alignment recognizes the inherent interdependence of a firm's strategy, accounting methods, and technology*".

According to him, management accountants can provide vital information in the configuration and application of corporate strategy in two main ways... a) By linking qualitative or perceptual product characteristics to their underlying costs (e.g. quality), and b) By quantifying the cost advantages that companies have, relative to existing or potential competitors. These cost advantages, if persistent, can result in sustainable high returns to the company.

Pearson goes on to say that strategic cost analysis can help companies identify the implicit strategies they are carrying out among four common types of missions for their businesses and product lines.

These missions are a) A **build** mission, which implies a goal of an increased market share without regard for short-term profit, b) A **hold** mission, which is a strategy to maintain market share by selectively managing prices to hold consumers, c) A **harvest** mission, which suggests going after short-run profits and cash flow with little regard for market share, and d) A **divest** mission, which implies positioning the company, company products or segments to be sold.

5 Strategic Management Accounting (SMA)

Defining strategy is –as discussed before- problematic. Strategic management accounting is no different. When one attempts to represent the Strategic Management Accounting process,

one has to distinguish between the Normative and the Descriptive models. Normative models of strategic management typically refer to a process involving: a statement of mission ((Pearce, 1982), the identification of strengths, weaknesses, opportunities, and threats; strategic design and implementation; and strategic feedback and control (Hamermesh, 1986, Hax and Majluf, 1984).

Descriptive models of strategic management, on the other hand, suggest that such normative models are, however, an overly simplified state of reality. As (Guilding et al., 2000), put it, descriptive models tend to represent strategic management not as a deliberate process, but as an emergent and highly fragmented process characterized by uncertainty.

As strategy has a wide spectrum of definitions, strategic management accounting too has the same characteristic. For example, Coad (1996) noted that "*Strategic management accounting is an emerging field whose boundaries are loose and, as yet, there is no unified view of what it is or how it might develop. The existing literature in the field is both disparate and disjointed*".

(Simmonds, 1981) (p. 26), the notable SMA thinker, defined it as "*The provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring the business strategy*".

Looking at strategic management accounting from a different point of view, (Govindarajan and Shank, 1992), divided strategic management accounting into four stages. They said that cost information plays a role in these four stages, which are: strategy formulation, strategy communication, strategy implementation, and strategic control. Furthermore, they apply three schemes to the SMA stages; value chain analysis, strategic positioning analysis, and cost driver analysis in order to build a framework concerned with the strategy/management accounting relationship.

Shank calls this framework 'Strategic Cost Management' which –according to him - could be defined as "*the managerial use of cost information explicitly directed at one or more of the four stages of the strategic management cycle*" (Shank, 1989) (p. 48).

Focusing on the final goods' markets, (Bromwich, 1990) (p. 29) defines SMA as "*the provision and analysis of financial information on the firm's product markets and competitor's costs and cost structures, and the monitoring of the enterprise's strategies and those of its competitors in these markets over a number of periods*".

In their study of American/United Kingdom/New Zealand companies published in 2000, Guilding, Cravens, and Tayles identified twelve strategic management accounting practices. This should not, by any mean, be considered a summation of SMA practices, but should rather be treated merely as a 'sample' of these practices. The identified practices were: attribute costing, brand value budgeting and monitoring, competitor cost assessment, competitive position monitoring, competitor appraisal based on published financial statements, life cycle costing, quality costing, strategic costing, strategic pricing, target costing, and value chain costing.

These activities were acknowledged to be strategic management accounting practices based on their encompassing a strategic orientation, and not just because of their proximity to the accounting practices needed by those managers charged with 'managing corporate strategy'.

Strategic Management pertains to long term planning of the organization's future performance. The business world is developing at a much faster rate. It is irrefutable that management accounting should be among the most important tools in the development of sound management strategies. In Clarke and Tagoe (2002) words, "*Compared to a decade ago, the operating environment of most firms is dynamic and hyper-competitive. It seems that the only constant is change itself*".

Information and Knowledge are the basis for a strong management accounting platform useful for planning purposes. The variables affecting any organization's operations are substantial. These can be categorized as internal, competitive, financial, legal, and institutional among other variables. The long-term success of the organization depends on the ability of Strategic Management Accounting (SMA) to incorporate all the relevant factors into its analysis to provide strategy/decision makers with relevant, timely, and sufficient information suitable for decision making.

Empirical research acknowledged that the information which SMA would provide on competitors' costs, cost structure, product profitability, and sales volume would be interesting but not critical to their survival. This type of information would act as an indicator along with other information.

Even if the company had the resources to undertake the policy of competitors' analysis as part of its SMA practice, this policy would not provide objective data and therefore no alteration to the company's strategic combination would occur. It is argued that it would be expensive and cost ineffective to maintain a thorough and in-depth SMA system as the information demands placed on a company by SMA outweigh the benefits it provides in sustaining a competitive advantage.

It can further be argued that the information necessary can be achieved without implementing a formal SMA process, which will decrease the cost of acquiring and processing data.

The principle of SMA is one of the principles that shaped the basis of new strategy models in the recent years. These models' goals are *to identify strategies that create a competitive advantage,* and *clarify the strategic intent of a company.*

The strategic decision making process can influence the procedures of management accounting. Additionally, the design of management control systems aiming to aid control strategy can have a positive impact on the performance of management accounting.

The concept of SMA requires management accounting to focus on performance measurement using strategic rather than tactical indicators. Strategies need to be formulated in accounting language and supported by the authority of accounting techniques, indicators, and reports if they are to be quantified, developed, and monitored.

Knowledge about competitors' cost structure, pricing, throughput strategy, volumes, and market share is needed if the company is going to succeed in discovering its competitor's strategic intent.

A strategic management accounting system could complement the financial reporting function to provide accurate internal and external reports. (Simmonds, 1981) (p. 27) defined SMA as "*the provision and analysis of management accounting data about a business and its competition for the use in developing and monitoring the business strategy, particularly relating levels and trends in real costs and prices, volume, market share, cash flow, and the proportion demanded of a firm's total resources*".

Well-managed companies collect the type of information needed for SMA. This information will help in determining the costs of strategies employed by the company and its competition and make them visible to management. As Dixon (1998) (p. 274) ascertains, "... *it is the strategic intent of a competitor that is the vital piece of information that is needed to give relevance and value to all the other information gathered in the process of SMA. If the strategic intent of the competitor is not known, then all the cost information, pricing and volume information remains subjective and questionable*".

Furthermore, the use of "hard" figures in presenting information on competitors can be misleading in that they would be estimates and not actual figures, and...With such a range of error inherent in these figures, comparability between the firm's figures and those of the competitors' should be questioned, and the costs of collecting and collating detailed competitor information may exceed any benefits.

5.1 Competitive advantage

While one of the goals of SMA is to create "sustainable competitive advantage", it is becoming increasingly difficult to maintain a competitive advantage in a market place where lean (flexible) enterprises operate. Rather, companies will be striving to create a "temporary advantage" over competitors.

(Dent, 1991) as referenced by Dixon (1998), describes the phenomenon as building a "*Multi-layered competitive advantage*". SMA can make a significant contribution to gaining competitive advantage in a global environment if it succeeds to:

(a) Legitimize and balance functional area and product perspectives, (b)Co-ordinate interaction across business units using formal systems, (c) Pay greater attention to emerging threats in proximate markets, (d) Focus on investment in competencies (activities that the company performs better than its rivals), (e) Develop a more integrated approach to resource allocation, and (f) Develop a clear strategic intent.

As soon as a company reaches a new accredited industry standard, it will enjoy the standard for a certain period of time as it will become an industry pre-requisite to trade. In other words, the standard will become institutionalized.

Hence, companies should continuously be searching for differentiation through developing new standards over shorter periods of time. It is better to produce according to customer specification and order, rather than producing for stock (basic principle of the Theory of Constraints production application). In addition to that, failure to monitor performance against external standards and, in particular these set by major competitors, is likely to lead - in the long term- to failure to compete effectively and loss of market share.

Moreover, over-reliance on financial monitoring leads to failure to manage **core** value added processes (e.g.: procurement and distribution) over the longer period. Therefore, getting the

balance right between financial and non-financial monitoring can radically improve the bottom line.

Financial factors are extremely important in the development and evaluation of strategic objectives, but over-emphasis on measuring strategic objectives against financial criteria could result in the organization losing sight of other very important performance indicators. Furthermore, the strategies will be too closely related to short term profit maximization at the expense of long-term improvements necessary to compete effectively.

Slow responsiveness to the changing outside world, and failure to review and update strategies and objectives as external circumstances demand means that the company's response to the changing environment would be impaired, and competitive advantage would be lost.

Strategic cost analysis allows a greater level of understanding of the direct and indirect costs' behaviour. Short term cost analysis might not be sufficient for an in-depth investigation, and might provide misleading information that can weaken strategy/decision making.

An organization must develop an accounting information system for strategic purposes and seek to build a database of strategic information tools. It must then be satisfied that it has sufficient data to draw comparisons against its competitors' costs, bearing in mind that *knowing the competitors' costs does not reveal their strategic intent.*

Grundy (1996) stated that strategic cost management is about managing costs for both financial and competitive advantage, longer-term as well as short-term. In order to achieve these goals, effective cost management needs to contribute to, rather than subtract from, the business strategy. Grundy went on to say that although cost is "rarely mentioned by strategic thinkers as being a key issue", some exceptions existed. These exceptions, when put together, will assist to build a framework for strategic cost management developed from: the

experience curve, cost leadership strategies, differentiation strategies, competitor analysis, the value chain, capability building, and environmental shifts and scenarios.

From a different angle, Kaplan (1987) argues that traditional management accounting systems produce misleading management information and that over time; costs were allocated in relation to the physical use of production assets -both capital and labour. But as the value chain of most businesses became more and more dependent on the service input, the traditional bases of cost allocation became increasingly irrelevant. There are often more important activities which support the value added within the production process than those associated with physical operations. Kaplan proposed that managers adopt 'Activity Based Costing' or 'ABC' which involves the following steps:

Firstly, managers need to have a profound understanding of how costs are generated and how they behaved (directly and indirectly) within the organization –and consequently identifying the key cost drivers.

Secondly, they need to examine whether processes can be simplified or changed in order to reduce costs or add more value (thus leading on into an ever developing form of business process reengineering and development, "the Kaizen philosophy")

Thirdly, having re-designed business processes they need to devise a method of tracking costs through monitoring the performance of a number of key performance indicators designed to measure the impact of key cost and value drivers.

6 Critique of traditional management accounting

Traditional management accounting history has been fixated on a search for origins, on the questions of who did what first, and when. Preoccupied with invention, rather than with diffusion and application, writings in this field have been rich in narrative terms but have neglected to explore the important linkages between phases of accounting development and their socio-economic context (Hopper and Armestrong, 1991).

7 Conclusion

In this chapter, the researcher provided a general idea about management accounting. A comparison of financial cost, and management accounting was presented. Cost/management accounting techniques are then discussed with an emphasis on activity based costing (ABC). ABC is regarded as a workable solution to the shortcomings of traditional costing.

Strategic management accounting is then discussed.

In the next chapter, the researcher will discuss the history and drivers of management accounting change.

Chapter 3

Management Accounting Change

"Stability and change are not necessarily contradictory or opposing forces, but can be intertwined in an evolutionary process of change" *Siti-Nabiha & Scapens (2005) (p. 58)*

1 Introduction

In the previous chapter, management accounting was discussed. In this chapter, the history and drivers of change will be mentioned. The chapter starts by elaborating on the history of management accounting practices during the last period, and then will go on by discussing the change that occurred to these practices and its drivers, causes, and consequences.

The chapter will then discuss the relationship between culture and management accounting practices giving examples from many countries especially south East Asia. The reason for this concentration is that this part of the world has recently seen tremendous development in the manufacturing/production field which in turn mandated an equally large transition in the techniques suitable to manage such development.

Culture, culture's effect on management accounting, and the consequence of national cultures are then mentioned. The goal of this part is to clarify the relationship between culture, management accounting, and change.

The next step for this chapter is to discuss the application of management accounting practices in developing countries, and in transition economies in a trial to make clear what the situation is like in Egypt as a developing country with an economy undergoing major transitions.

2 Management Accounting History and Change

(Johnson and Kaplan, 1991) stated that at the turn of the century, and because of the intense competition and wave of mergers in the United States, a new form of organizations emerged. They called it "The vertically integrated, Multi-activity firm". This evolution demanded a major development in the field of management accounting in order to be better equipped to manage such firms.

Budgets were devised to co-ordinate internal resource flows from raw material, to final product, and the Return on Investment (ROI) measure was developed to compare performance in the various parts of the organization. (Ahmad & Scapens, 2000)

(Johnson and Kaplan, 1991) argued that from 1901 until 1925, all the management accounting principles, measures, and rules used until now were devised. The period from 1925 to the 1980s saw no improvement in the field due to the rigidity of financial reporting rules and the implied endorsement accounting educators gave to financial accounting after W.W. II.

Since the 1980s, the search for "Efficiency" became more intense. The introduction of methods like Total Quality Management TQM, Just in Time JIT, Activity Based Costing ABC, and The Theory of Constraints TC –to name a few- were steps taken by organizations in their strive to achieve maximum efficiency.

According to Hopper & Armstrong (1991), Traditional management accounting history has been fixated on a search for origins, on the questions of who did what first, and when. Preoccupied with invention, rather than with diffusion and application, writings in this genre have been rich in narrative terms but they have neglected to explore the important linkages between phases of accounting development and their socio-economic context. Given the belief that this perceived deficiency needs to be addressed, then the recent marriage between accounting antiquarianism and the doctrines of liberal economics constitutes a definite theoretical advance. Premised on the notion that changes in the forms of business organisation and control systems are driven by searches for efficiency in competitive environments, accounting development is seen as an integral part of this evolutionary process.

They go on to state that Johnson & Kaplan's Relevance Lost (1987) is the most thorough-going exemplar to date of this new tradition. Given the impact of this work in academic, consultant and

practitioner circles, there are good reasons for subjecting its historical and theoretical adequacy to the closest scrutiny, not least because these issues may bear importantly on the prescriptive message which Johnson and Kaplan draw from their version of accounting history. In conformity with their evolutionary model, Johnson and Kaplan portray the initial phases of cost accounting development as a steady accretion of knowledge and technique achieved by practicing engineers and managers in their searches for efficiency. As a result of this process, they argue, virtually all of the contemporary techniques of management accounting were in operational use by about 1920 Having reached this point, Johnson and Kaplan then depart from their basic evolutionary model to argue that many of the achievements of this "peak era" have subsequently been stifled by the influences of financial reporting and academic teaching. This theoretical twist enabled the authors to initiate a powerful attack, from the historical ground of the 1920s, on the inefficiencies resulting from the contemporary teaching and practice of management accounting. Accounting information systems of questionable relevance are said to be used in a mechanical fashion by a generation of American executives brought up to manage "by the numbers". This, in turn, is held responsible for a decline in the international competitiveness of American businesses, especially in relation to the Japanese. This message evidently meets the approval of many practicing managers, perhaps because the inroads made by Japanese manufacturers are indisputable, perhaps because there is some truth in the thesis of accounting stagnation, but also, perhaps, because of the implicit daemonisation of academics and financial accountants.

Despite the respect in which Johnson and Kaplan's work must be looked at, writers like Clawson (1980), Gordon *et all* (1982), Littler (1982), Montgomery (1987) and Nelson (1974) argued that their theory is flawed. They argue that history and prescription used in the relevance lost theory neglected the socio-economic conditions on which the achievements of the 1920s depended. In

contrast to the social harmony and Self-equilibrating behaviour of individuals, firms and markets assumed in the transaction cost framework employed by Johnson and Kaplan, many of the historical events used to argue the thesis of *Relevance Lost are* better understood through a "labour process" approach to economic and industrial history. These writers Recognized the need for a broader, more critical, institutional analysis of capitalistic development, the core presupposition of this perspective is that social and economic conflicts arising from the modes of control which characterize particular phases of capitalistic development stimulate the creation of new forms of control intended to eliminate or accommodate resistance and to solve the associated problems of profitability. These new forms of control, in turn, diminish, partly because their competitive advantage disappears as a consequence of their generalization and partly because they give rise to new contradictions and forms of resistance. Thus a labour process approach, in contrast to one utilizing transaction cost theory, stresses crisis rather than continuity; conflict rather than internal consistency; social and political conflict rather than harmony; the monopoly power of corporations rather than self-equilibrating competitive markets, patterns of class formation in specific economies rather than a separate and limited view of the individual; and human agency in its cultural and institutional setting rather than economic reductionism.

According to (Roslender, 1996), Four lines of criticism are evident in the relevance lost literature. First, the limited evidence of technical developments within management accounting practice in response to the major changes in manufacturing technology in the previous period. These changes resulted in greatly increased productivity, flexibility and higher quality, together with reduced lead times and inventory levels, neither of which management accounting seemed interested in, nor able to report. Second, the argument that management accounting was the captive of financial reporting This resulted in a damaging short-termism in business outlook, coupled with problematic cost

allocation techniques underpinning stock valuation, and an over-reliance on historical information for process control. An obsession with a single cost system was argued to provide information too distorted, too aggregated and too late to be of value to management. A third set of criticisms was directed at academic management accountants. Too much recent research output had been in the form of simplistic, economics-based models of the outside world, e. g. agency theory, rather than studies of ''best practice''. The research literature, and in turn the textbook tradition, became unfruitful, divorced from the wider audience of management accounting practitioners. Addressing the relevance issue would necessitate closing the theory gap that occurred in the previous three decades. The final criticism was the most general and the most contentious, being concerned with the history of management accounting. Instead of viewing management accounting as a recent development, it was necessary to recognize its origins in the first half of the nineteenth century. A mature management accounting tradition was well-established in the 1920s, providing the basis for effective cost management, management control, and performance measurement. Management accounting's lost relevance is a recent phenomenon, which has resulted in its progress being slowed down, although not yet beyond the point at which its promise has completely been wiped off.

From a centralized/decentralized point of view, and according to (Granlund and Lukka, 1998), management accounting is getting rid of its centralized characteristic, and becoming more and more decentralized. Moreover, it is consistently being integrated into the core parts of business. This, in turn, shifts management accounting from the management accountants' domain per se, and into the managers' field. Management accounting should be viewed as a support function, and not as score keeping job. Its role should be the support of decision makers.

A recent publication by the international federation of accountants (IFAC, 2001) based in the United States of America, focused heavily on "*a need of its members to put* ***Management*** *back into* ***Accounting***".

The demand placed upon management accounting and its role in organizations is increasing. Management accountants are facing both opportunities and threats. According to (Burns and Yazdifar, 2001), routine accounting tasks will continue to demand a small number of specialist accountants who can rely on the technology to do the bulk of the work. This number is declining as technology progresses. The opportunity is that management accountants should act as internal business consultants to decision makers on all levels. [See also (Burns and Baldvinsdottir, 2001)].

(Mouritsen, 1996) on the other hand, sees many threats facing management accountants. Managers (i.e. IT and production managers) are more likely to compete with accountants in performing such consulting roles, especially if they possess sound financial knowledge (acquired, for example, from an MBA program).

3 Perspectives of Management Accounting change

(Burns and J.Vaivio, 2001) distinguished between three perspectives of management accounting change.

- The epistemological nature of change.
- The logic of change
- The management of change

They first start by stating that "Change is an exciting but problematic concept, defying definition and structured analysis".

"Is management accounting change a disruptive revolutionary phenomenon that has shattering impacts within organizations, or should it be conceived as a more incremental evolutionary chain of development?" (Burns and Scapens, 2000, Scapens, 1994)

Change in management accounting is normally viewed as good, positive, or progressive. However, it can also be associated with negative development. Management accounting change can also introduce substantial problems instead of the anticipated improvement.

Furthermore, the new management accounting activities could be a mere re-expression of the old (sort of old wine in new bottles). The question that has to be asked is what magnitude of change actually counts as genuine change?

Another element of the epistemology of change is the classic dichotomy distinction between change and stability as co-existing elements of reality.

Researchers prefer to make large sample statistical comparison of the current situation, and analyse factors of stability instead of the deep inspection of the dynamic factors of change in management accounting. In addition to that, there is a lot of doubt around the capability of researchers to study change as a separate process that has a distinct start and end points in time, as opposed to change as a continuous process.

When we consider the logic of change in management accounting, several thoughts have to be considered.

Change can be considered either a managed and formal organizational event/process' or 'an unmanaged phenomenon that contains informal elements. Advocates of the first opinion argue that change is a pre-planned action that was initiated by very highly motivated actors that take responsibility for the transformation in the management accounting profession. The opposing party argues that management accounting change is not a consciously planned and rationally executed part

of reality. Both external and internal influences affect organizations and compel them to change randomly according to the magnitude of different pulling forces.

The logic of management accounting change can also be categorized as *'linear or non-linear'*. (Dent, 1991; Burns & Scapens 2000), speculate that change is a *systematic* process that moves toward explicit and well-defined goals using agreed procedures, and following ordered stages. Change can also be looked at as *unsystematic*. Goals are ambiguous, procedures are unclear, and planning is non-existent.

A third view of the logic behind management accounting change can be verbalized in the following question. *Does it* (management accounting change) *follow some type of functional logic, or is it to be regarded as an inherently political activity?*

The way management accounting change is managed is yet another point of view worthy of inspection while investigating change.

Change can be exhibited as a *'centrally'* driven effort, and can also be regarded as a fundamentally *'local'* concern. This difference of opinion is based on the argument that top management plays a key role in the planning, organisation, and the application of change. Other players –organizational agents- play a secondary role in this area. Challengers of the previous opinion argue that top management is unable to identify the specific work conditions, factors, and institutions practically in play. Local questioning is the real initiator of change, and therefore it can/should not be a central activity.

Management accounting change can -also- be viewed as a *passive* –more adaptive- role within the organization's culture. Conversely, change can be considered an *active* part in the processes that fundamentally transform an organization's core institutions (Dent, 1991); (Partanen, 1997).

The type of environment within which organizations operate, institutions, competition intensity, type of business, company size, new technologies, management orientation, and type of employees are some of the factors governing when, why, how, and to what extent will change in management accounting practices be necessary and progressive in the lives of organizations.

Furthermore, management accounting is no longer considered discrete concepts mastered by a handful of elite specialists within the organization, but rather is becoming a widely recognized body of knowledge, understood and applied by a growing number of people in all levels within the organization.

From a somewhat different point of view, (Hiromoto, 1991) stated that in the age of continuous innovation, manufacturers can no longer produce and market large volumes of standard products with a relatively stable market and technological environment. There has been a shift from a manufacturing environment where markets and technologies were stable to one where markets and technologies are unstable and change quickly. Management accounting has to consider those when designing management accounting systems in order to create systems that are compatible with the environment they are implemented within.

4 Example of management accounting change

According to (Chongruksut, 2002) (Chapter 3), management accounting systems in most Asian countries are based to a large extent on US practices. Seeing that the majority of local firms in Thailand and other Asian countries are small- or medium-sized family-owned enterprises that have not realized the importance of management accounting information to effective management, the management accounting practices have mainly been used within large-sized and international firms. Generally, management accounting practices in international companies tend to be more advanced

than those in local companies because these companies use the management systems of their parent companies in western countries (Baydoun et al., 1997).

Management accounting practices in Asian countries are largely not separated from financial accounting as a distinct discipline. The team of accounting staff usually performs within both the financial and management accounting areas. Countries in the Asia-Pacific region, with the exception of Japan, still use the traditional management accounting techniques, such as standard costing or budgetary control. Japan is the only country in this region that has an exceptional style of management -differing from North American management style- emphasizing teamwork, a long-time view and 'feed-forward', which focuses on foreseeing and preventing problems before they occur. Therefore, target costing, concentrating on co-operation between managers and workers to solve problems affecting the production cycle, is a current management accounting technique that reflects the distinctive characteristics of Japanese management (Baydoun et al., 1997).

In a rapidly changing environment, management control systems, including management accounting systems, have an important role in the organization's response to transformation (Kloot, 1997). In particular, management accounting information will assist an organization to identify the requirements for alteration and the way to respond to a changed environment (Atkinson et al., 1997). Meanwhile, management accounting information should be updated in accordance with a changed environment (Warwick et al., 1997). Moreover, (Shields, 1997) claims that changes in the environment, such as deregulation, globalization and increasing customer demands, will induce changes in management accounting practices. Similarly, (Yakhou and Dorweiler, 1995), who studied the link between competition and changes in management and control systems by comparing British, French and U.S. organizations, found that competitive threats have influenced the adoption of innovative management accounting methods.

In an era of globalization, countries cannot avoid the influence from the growing internationalization of business and management practices. Information, including accounting information, is essential for an organization to create a competitive advantage in a period in time where borders between countries have no meaning (Suwongwarn, 1998). Hence, the importance and the development of management accounting systems in these countries increase. For example, management accounting systems in Thailand have recently received extensive attention and importance from Thai managers because of the recent growth in the number and size of Thai owned firms, the growing frequency of joint ventures, and the establishment of large multinational enterprises (similar to the current situation in Egypt). That created the demand for better accounting information and for more advanced / better management accounting techniques. In addition to that, the raising of capital through the Thai stock exchange and the government sector's performance measurement in a more tangible way, such as the profit-orientated way, has resulted in improvements in management accounting information and techniques (Hossain and Adams, 1997). In recent years, management accounting systems have had a high rate of change and the characteristics of the new management accounting systems focus on the resource-based approach to strategy formulation, non-financial measures, process-based measures (Atkinson et al., 1997), cross-functional information and the future-orientated information (Kloot, 1994). These characteristics correspond with several attributes of ABC. Consequently, few innovations have engendered as much interest as ABC in the last few years (Swenson, 1995). (Adler et al., 2000b) study shows that the majority of surveyed firms in New Zealand (80% of respondents) had made a momentous transformation to their cost management systems during the past five years and most of them (62% of respondents) planned substantial revisions to their advanced accounting systems, including ABC, over the following three years.

(Foster and Young, 1997a) study also shows that ABC is the management issue to which managers in the U.S.A. and Australia paid the most attention to in the early twenty first century.

4.1 Example of resistance

As an example of resistance to management accounting change, Siti-Nabiha & Scapens (2005) found that when a Value Based management (VBM) system was imposed on a subsidiary by its parent company in a far east country, (VBM) was actually implemented but the key performance indicators (KPIs) became decoupled from the day-to-day activities of the business, thereby creating a level of stability which ultimately contributed to accounting change. However, although the new system of KPIs was implemented, it was done in accordance with the existing norms (institutions), values and practices within the subsidiary, and as a result there has been no effective implementation of a value maximizing, strategic orientation. As such, the implementation of VBM has been largely ceremonial and has not had an impact on decision-making and/or performance in the company. Thus, at another level, their findings illustrate resistance, and could be considered as an example of institutions affecting the application of a management accounting initiative / accounting change that was unsuccessful.

According to other studies of resistance to accounting change Burns (2000); Scapens and Roberts (1993); Vamosi (2000), the new accounting systems and/or techniques were -ultimately- not implemented and therefore the intended accounting change was "unsuccessful". However, with Siti-Nabiha & Scapens (2005), the new performance measurement system (PMS) using Key Performance Indicators (KPIs) was implemented, but did not have the intended effects on the ways in which managers within the company thought about/looked at their operations. Nevertheless, it did pave the way for a new PMS system in which KPIs were used for individual performance

evaluation. It is worth noting that the KPIs used for this newer system are not the same as the KPIs required for VBM. In other words, institutions still affected the targeted change.

4.2 National vs. Organizational cultures

"*Organizations have prevalent value systems which are part of their organizational cultures. These value systems show a national component according to the nationality of the organization's founder(s) and dominant elite.*" *(Hofstede, 1985) (p.3)*

After conducting rigorous research, Hofstede concluded that within the components of national cultures are embedded "value systems" (Institutions) that parents transfer to their children within a certain culture.

He defined Values as "*The broad preference for one state of affairs over others*". Values shape our opinions on how things should be, and they indirectly also affect our behaviour, and perceptions of how things are.

In their study of an east-Asian organization, Siti-Nabiha & Scapens (2005) said "*the insights to be gained from using this institutional framework have some similarities with those obtained from other processual research into organizational change – e.g. Molinsky (1999). But whereas Molinsky, for example, used the notion of dominant paradigms, other researchers studying processes of organizational transformation have used the concept of culture (Schein, 1992; Hassard and Sharifi, 1989; Buchanan and Badham, 1999; Nicholson, 1993; Bhimani, 2003)*". The notion of culture in this work is like to the notion of institutions in OIE. Schein, a renowned writer in culture research, defines culture as: "*A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*". Having a very wide range of meanings, culture -used in

research- can get complicated. Institutions, on the other hand and as defined above, can be associated with the notion of management accounting practices as organizational routines. Furthermore, the institutional framework enables the researcher to explore the notion of ceremonial change and to study the path-dependent nature of accounting change. In addition, it allows better focus on the relation between stability and change.

5. Drivers of management accounting practices change

Pettigrew (1995) as referenced in Siti-Nabiha & Scapens (2005) mentioned that to better understand the process of change, a researcher must emphasize "first, the importance of embeddedness and studying change in the setting of inter-connected levels of analysis; second, tracking down the history of change in the past, present and future time; third, the need to explore the environment of action, and how it(the environment) is a product of action and vice-versa; and finally, acknowledging that Causality is neither linear nor singular.

Scapens (1994); Burns and Scapens (2000) argue that management accounting practices can be viewed as organizational routines and, as they are enacted and reproduced through time, they become institutionalized. The process of institutionalization involves a separation of behavioural patterns from their specific historical circumstances when they originated, so that routines take on a normative and factual characteristic. This characteristic in turn obscures their -the routines- relationship with particular interests. Institutions are implicitly accepted as "the way things are done" in the organization and, as such, are the unconscious assumptions which underpin the organizational behaviour. Even so, these institutions, more than likely, could have originated from explicit choices taken previously to solve particular problems. When choices or solutions to problems continue to be replicated and work over time, they develop into unofficial rules, and subsequently become a routine activity (Schein, 1992; Scapens, 1994). Eventually, this routinized

behaviour could become instinctively taken-for-granted or in other words, institutionalized. From an OIE perspective, accounting routines can be institutionalized in a **ceremonial** or **instrumental** way. **Ceremonially,** institutionalized accounting routines are organizational rituals used to preserve the status quo and the power or interests of specific groups or individuals, rather than to aid decision-making. In contrast, **instrumentally,** institutionalized accounting routines are the basis utilized to make informed decisions. The wider institutional setting within the organization decides whether accounting is institutionalized ceremonially or instrumentally. Like any other routine widely established within any organization, accounting routines both shape and are shaped by other institutions. For this reason, how management accounting is practiced, how accounting information is used, and the accountants' role, all depend on the ruling institutions within the organisation (Tool, 1993; Bush, 1987; and Dugger, 1990), Burns and Scapens (2000), Siti-Nabiha & Scapens (2005).

From an external point of view, Carruthers (1995) mentioned that accounting studies utilizing an NIS perspective tend to view decoupling as an *organizational response* to external pressures to implement new accounting techniques. It is argued that the organisation (or the organization's main decision makers) attempts to secure legitimacy/acceptance/approval from the external community or social/business environment by implementing the new management accounting routines, but simultaneously decouples them from day-to-day operations in order to preserve the organization's technical efficiency. Meyer and Rowan (1977) argued that organizations would be more inclined to avoid the disruption that could be created by imposing new institutional systems that are designed to secure external legitimacy, by decoupling them from internal technical systems, hence the idea of "window dressing".

Adversely, the notion of decoupling was criticized on many bases (even though it still guides many researches in accounting). Scott & Myer, (1991) questioned the simple dichotomy between institutional and technical systems. Powell, (1991) wondered whether the technical can effectively be decoupled from the institutional. Perrow, (1985) had reservations over the overly simplistic treatment of power and politics.

According to Chow et al., (Dent, 1991), factors influencing and shaping change in management accounting practices, especially at the macro level, include:

- Production and information technology.
- Competition.
- Legislation & Regulation.
- Strategy and organizational processes.
- Administrative and social controls.
- Financial markets.
- Organization structure.
- Inter-organizational relationships.
- Education.
- National & organizational culture.

Figure (3.1) represents a framework of relevant factors and includes an argument of general tendencies for convergence across nations and firms. It is based on a review of earlier studies suggesting economic and institutional drivers in the design and process of management accounting/control practices.

It is safe to say that in the analysis of modern organizations, both economic and institutional pressures have important roles to play. Even though they are conceptually separate categories, they complement each other, and are simultaneously in effect, therefore being easily tangled in practice.

Institutional isomorphism is based on two core ideas:

Environments are collective and interconnected

Organizations must be responsive to external demands and expectations in order to survive. These demands or pressures include such institutions as the state, professions, capital markets, and public opinion. Organizations' strategic responses to environmental pressures largely correspond to what (Oliver, 1990) describes as being of an Acquiescing nature, meaning that the cause of converging responses emerge from the research for legitimacy (social fitness), and efficiency (economic fitness)

In practice, economic and institutional pressures (or their effects) may get confused due to their interconnected relationship. For example, ABC may appeal to the idea of efficiency improvement (that under certain circumstances it will result in increased efficiency leading to better profitability). For consultants, it is relatively easy to market such a product, which promises an improvement in corporate performance. Companies purchasing "cheap standard" ABC solutions can be viewed as providing an institutionalized routine answer to pressures of change (the need to appear legitimate). Also, a company might want to apply ABC just because a/the leading company within its organizational field has adopted it, or because ABC is thought to give a modern image to its adopters, thus providing help for coping with legitimatized pressures emerging from this company's organizational field of operation (DiMaggio and Powell, 1983).

Schein (1992), asserted that institutions, can act as a barrier to change. They shape the perceptions and thought of the organization's members. Thus, institutions can shape processes of change, and lead organizations to be locked into certain institutional patterns (David, 1994). Change which is not in line with the current institutions will -more than likely- be resisted and/or transformed into practices that are consistent with those institutions. By any mean, this should not convey the idea that institutions are definite obstacles in the way of change. Institutions do change, although the

process of institutional change is usually evolutionary and path dependent i.e. shaped by existing institutions Siti-Nabiha & Scapens (2005).

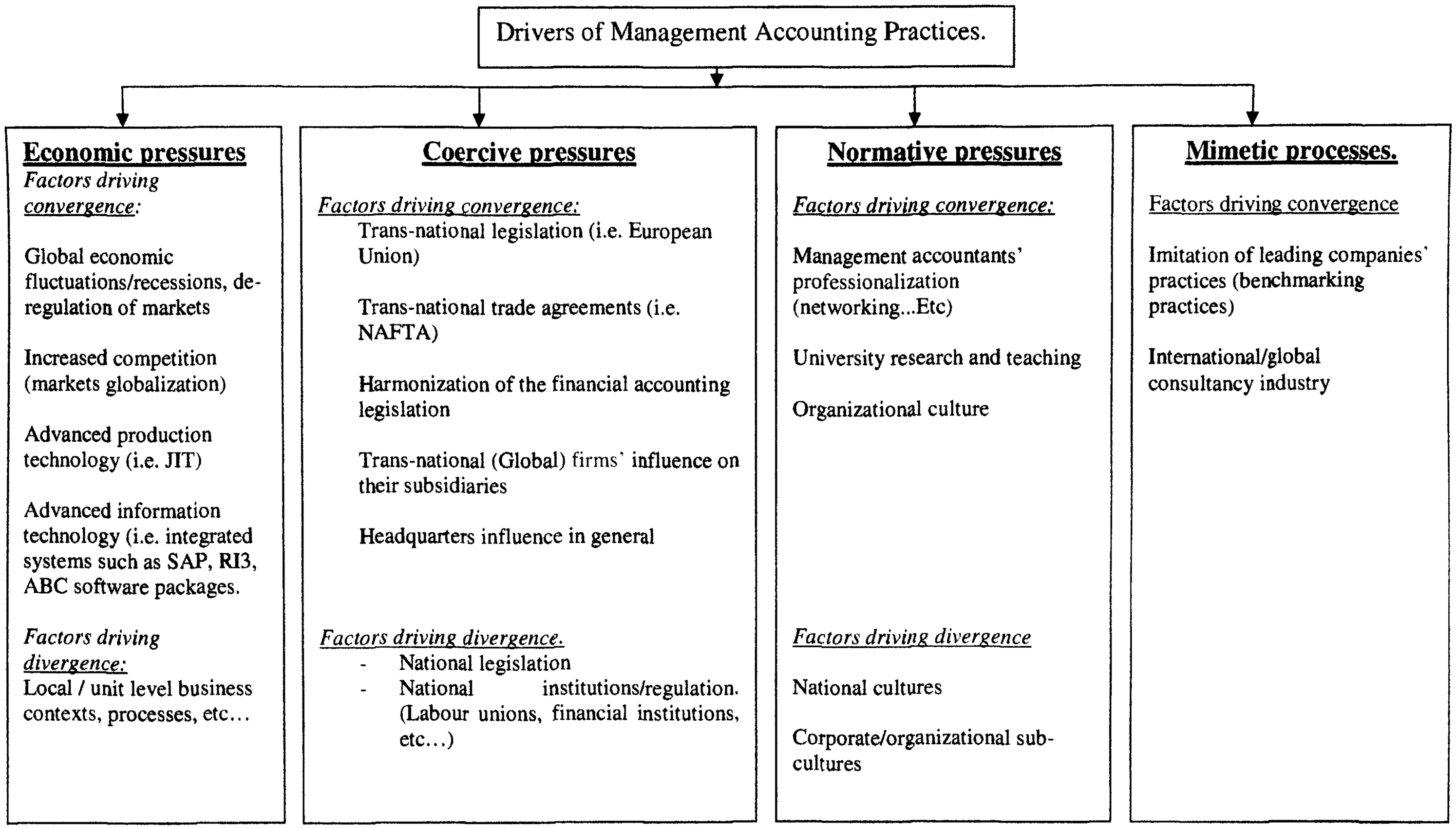

Figure 3.1: Drivers of Intra firm convergence/divergence of management accounting practices in internationally operating firms

Adapted from (Abdel-AL, 2006)

5.1 Economic pressures

Due to increasingly global economic reasons, management accounting practices are adaptive to changes in their environments, though with varying degrees of responsiveness. The particularities of the business, corporate size, and technology -to name a few factors- may determine the range of possible change and adaptation processes to these impacts. The role of advanced production and information technologies in driving convergence in corporate practices, also, has important consequences for management accounting systems (Johnson and Kaplan, 1987).

The ever-growing group of firms applying standardized software packages increases the macro-level homogenization of management accounting practices within companies. Further, in multi national companies, such system packages are likely to help the creation of global information systems. Intensified globalization of markets and competition is driving global management accounting homogenization (Trabold, 1997).

The increasing magnitude and importance of global value chains, foreign direct investments, international joint ventures and networks have important implications for the convergence of macro-level management accounting practices (Firth, 1996).

(Porter, 1996) suggested that firms develop unique competitive strategies in response to changes in competition. Some studies have shown that there is considerable variation in firm's strategic responses to similar institutional environments, which stimulate differentiation in organizational fields (Zucker, 1991).

However, some studies have suggested that at least within certain organizational fields, different companies have similar responses to changes in competition, (Martin et al., 1983, DiMaggio and Powell, 1983).

At times when there are large competitive pressures endangering the existence of companies, and firms are busy with creating competitive strategies in their business operations, standard management system solutions (such as ABC) that are available at the market may look easy to implement and convenient to use and, therefore, appealing. Management accounting systems typically are regarded only as back-ups for the "more important things", but do not, themselves, produce unique competitive strength (Granlund, 1996, Porter, 1996).

5.2 Coercive pressures

Coercive pressures reflect the enforcing aspects of certain institutions. There are clear pressures on firms to change their management accounting practices to be consistent with the mandates of trans-national institutions.

On a global level, the most important distributor of trading rules is the world trade organization WTO. These institutions act as underlying forces that may not always have a direct effect on firm's management accounting systems, but instead set a frame for other forces that lie closer to corporate practices. One essential institutional pressure emanates from the international harmonization of financial accounting legislation.

While there are observable routes for management accounting homogenization originating from trans-national harmonization of legislation and regulation, there also are other important sources of isomorphism. These often relate to corporate (inter-) dependencies (Oliver, 1990).

(DiMaggio and Powell, 1983) stated that prominent sources of coercive pressures on management accounting practices result from other companies upon which the particular company is dependent. E.g. some companies might require certain operational/accounting

procedures from their suppliers. However, this dependence based coercive pressure perhaps most prominently emerges within companies, between their internal units.

In complex organizations, with several divisions or subsidiaries, formal and informal initiatives for homogenization are prevalent. The headquarters or parent company may launch reform procedures in the division or subsidiary. It is also common -in trans-national enterprises- to force their foreign divisions/subsidiaries to adopt similar reporting systems or performance measurements frameworks to those used in the headquarters/parent company (Hedberg, 1998).

According to (Bartlet and Ghoshal, 1989) global model, it seems evident, especially for the global companies trying to establish global homogenization and coordination, that global management accounting (reporting) systems offer important tools facilitating this difficult task of coordinating between subsidiaries.

While national legislation and institutions have their part to play in guiding corporate practices –especially toward divergence- their role seems to be gradually weakening. Some argue that national institutions have preserved their role as important players in the organizational and societal fields in different countries (Mayer and Whittington, 1996). Yet, it seems apparent that their importance is decreasing rapidly along with global trends of development in information and production technology, capital markets, international harmonization of legislation and the creation of powerful trans-national trade agreements (Lillrank, 1995). The current role of national institutions seems to be in setting limits to absolute convergence.

5.3 Normative pressures

Normative pressures concern social obligations and appropriate social conduct in human behaviour. They are mediated by values, norms, and roles, which people adopt in their various domains of social conduct. The major difference between normative and coercive pressures lies in the fact that the former are formally less compelling by nature than the latter (Scott, 1995a).

Normative pressures are significant as far as the homogenization of management accounting practices is concerned. The recent trends of professionalization of management accountants have included the promotion of the ideas of cost management and non-financial measures.

"Professions are subject to the same coercive and mimetic pressures as are organizations. Moreover, while various kinds of professionals within an organization may differ from one another, they exhibit much similarity to their counterparts in other organizations" DiMaggio & Powell 1983(p. 149)

(DiMaggio and Powell, 1983) suggested two aspects of professionalization that are prominent sources of isomorphism: **University education**, and **professional networks**.

In spite of the particularities that would definitely prevail in the teaching programs of management accounting in different countries, there are significant factors driving convergence in this regard (e.g. textbooks written by internationally acclaimed authors like Horngren, and teaching case materials like Harvard case series).

Professional networks mould perceptions about professional behaviour. Such mechanisms create a range of professionals -with similar orientation and disposition- that are almost interchangeable in most positions they occupy.

While we also may identify economic pressures driving this trend of management accountants' increasing business orientation, the institutional pressures of professional networking and –gradually- university education, are evident.

National professional associations are driving convergence both at national and international levels. Professional expertise is becoming similar in the business world. Professional institutions influence this development at the national level. National institutions like IMA in the United States, and CIMA in England tend to follow current international trends and legislation and mediate that knowledge to their members. Their role in driving local Divergence now seems quite limited. These institutions may be seen as channels through which global movements may spread into practices at the national level.

National and corporate cultures have traditionally been seen as perhaps the most important drivers of divergence regarding management accounting practices. At the micro level of management accounting practices, the influence of national cultures has been and still is in the direction of driving divergence. At the macro level of management accounting –on the other hand- the impact of national cultures on management accounting practices seems to be diminishing. In the long run, companies can not afford to let cultural particularities have macro level influences on corporate practices (Ralston, 1997).

The global tendency seems to be that the unique features of the cultures of "small" countries (i.e. Egypt) are diminishing the more people interact across national boundaries. Goddard 1997 concludes -in his international comparative study- that the influence of

corporate cultures on management accounting appears to be stronger than that of national cultures.

It is clear that companies today function under similar global pressures. At the macro level, firms tend to adopt similar or corresponding managerial ideas (i.e. TQM, JIT ...), as well as management accounting ideas (i.e. ABC, Target Costing ...) no matter what their corporate cultures are (most likely different). On the other hand, it appears plausible to argue that if corporate cultures drive divergence in management accounting practices, similarly as national cultures, they do it predominantly at the micro level only (Granlund and Lukka, 1998).

6 Management Accounting and Culture

"It seems -whenever research is conducted in the field of comparative management accounting, or international/inter-cultural management accounting- that the researchers look for factors of difference, or divergence, rather than -at least-considering the factors of similarity, or convergence.

The few accounting studies that have investigated the effects of national cultures on management accounting practices stress the particularities of German, American, Japanese ... management accounting practices. A closer look at the findings of these studies reveals patterns of similarities". *(Granlund and Lukka, 1998) (JMAR Vol. 10)*

Management Accounting is widely concerned about the comparison between practice and some "ideals". Rather, management accountants should focus more on Management Accounting per se (Scapens, 1994).

Normally, studies show factors of similarity and differences, but it seems that differences are typically emphasized. A notable observation was that seemingly similar managerial ideas or system designs e.g.: Total quality management **TQM**, Just in time **JIT**, Benchmarking, Activity based costing **ABC** and Activity based management **ABM**, Life cycle costing **LCC**, Target costing **TC**, Balanced scorecard **BSC**, or Business oriented management accountants seem to be increasingly popular all over the industrialized/post industrialized world.

(Porter, 1996), Labels these ideas or system designs as being the Promoters of Operational effectiveness rather than being sources of Sustainable Strategic competitive advantage.

We should not ignore the fact that there -more than likely- are differences in management accounting practices at the *micro* level from one country to another due to cultural differences, or government regulation, but on the other hand, there is reason to believe that convergence plays an increasingly important role today.

According to (Kato, 1993), Toyota is a pioneer and a world leader in the application of Target costing. (Ewing, 1995) stated that Asea Brown Boveri is doing extensive control system development work based on the balanced scorecard. (Jarvenpaa, 1997) stated that Nokia has formed an organization of product development controllers who extensively apply Life cycle costing in their work to support product development personnel with financial information.

It is possible to examine practices at the micro or macro levels. By macro level we mean **concepts** (ABC context, activity or cost driver), **ideas** (ABC improved allocation of overheads to cost objects in today's operating environment), **techniques** (ABC as a two

multi-step cost allocation technique), **system designs** (how and with what kind of software is ABC technically implemented), and partly the **purpose of using certain pieces of management accounting information** (advanced process cost control, or reduction of overheads through ABC implementation). Micro level refers to the **behavioural patterns and styles of information use** (budgetary-related behaviour).

Micro level deals with the *practical doing* of management accounting in the everyday life of organizational actors (management accountants, and managers using management accounting information)

According to (Kaplan, 1983a), there existed obvious problems with U.S. manufacturing.

"Some believe that cultural and environmental differences are responsible for the superior manufacturing performance of Japanese firms and that these differences limit the relevance and transferability of Japanese management practices to the U.S."

Robert Kaplan, 1983(p. 690)

In comparing two countries' experiences, a researcher will notice many differences, and would be tempted to rely on these differences in concluding that the adoption of various management practices from country A (e.g. Japan) ***would not*** create value in country B (e.g. United States).

In contrast, (Hayes, 1981); (Schonberger, 1982), proved that many of the successful practices in Japan require only a management commitment to improve manufacturing performance through procedures and investments that would seem to have easy transferability to the United States' firms.

Some examples are:

"Matsushita" took over a Motorola television plant in the U.S. and over an eight year period, using essentially the same workforce, was able to increase production volume by

40 percent while reducing defects from 150 / 100 sets to 3 / 100 sets produced. In the Japanese parent company, the factory measured defect rate was 0.5 / 100 sets.

"Sony" and "Honda" in U.S. Manufacturing facilities have achieved the lowest defect rates in their respective industries. Both companies have enjoyed expanded market shares and are increasing their investment in U.S manufacturing facilities.

One good lesson that managers can learn from Japanese managers is not to openly accept manufacturing conditions "as is" and try to implement optimization techniques to deal with these conditions, but rather they must actively intervene with the applied techniques and check for suitability and appropriateness to the new business environment. As stated by (Kaplan, 1983a), organizations generally - and management accountants especially - should not restrict themselves to the currently applied criterion (criterion that basically take into consideration existing/mature products), but rather these organizations should get out of this shell and look at production differently. This different look should focus on more important criterion that were not as important (or even did not exist before). An example of these criterion is Quality (definition, and management), inventory (importance, and management), and productivity (definition, and administration).

He then goes on to assert that non-quantifiable measures should be introduced and applied. There is a danger from relying solely on the easily quantifiable savings in input factors (e.g. labour, energy, and materials) when assessing the organization's new capital investments. The new measures should be embedded into the analysis. An example of these measures is improved product quality, increased manufacturing flexibility, and reduced inventory levels.

6.1 The Consequences of national culture

According to Schein (1997) and Gagliardi (1986), among others, all artefact-level issues in organizations, such as tools, approaches, and man-made physical items are responded to by groups of people based on their social, shared values.

What feels "good" and consistent with those values is promoted or liked, what feels to be against the values is refused or resisted. These values are based on common shared assumptions that have been formed by the history of events the group has experienced together; therefore, these shared assumptions are the basis and essence of any culture of a group.

Tropenaars (1994) uses a division originally developed by Talcott Parsons, which takes into account two dimensions: Affective-neutral and Diffuse-specific (figure 3.2)

Specificity: means factual, definitive approaches, even bluntness in decisions and orders, and consistency of approach. **Diffuseness:** means indirect and even ambiguous management styles, tactfulness, and a highly situational approach.

In diffuse relationships "there is a real and personal contact, instead of the specific relationship prescribed by a contract" (Tropenaars 1994)

Neutrality: Strives to consensus, to diminish and control the differences between opinions. **Affectiveness:** means an emotional approach that accepts and broadly supports different points of view.

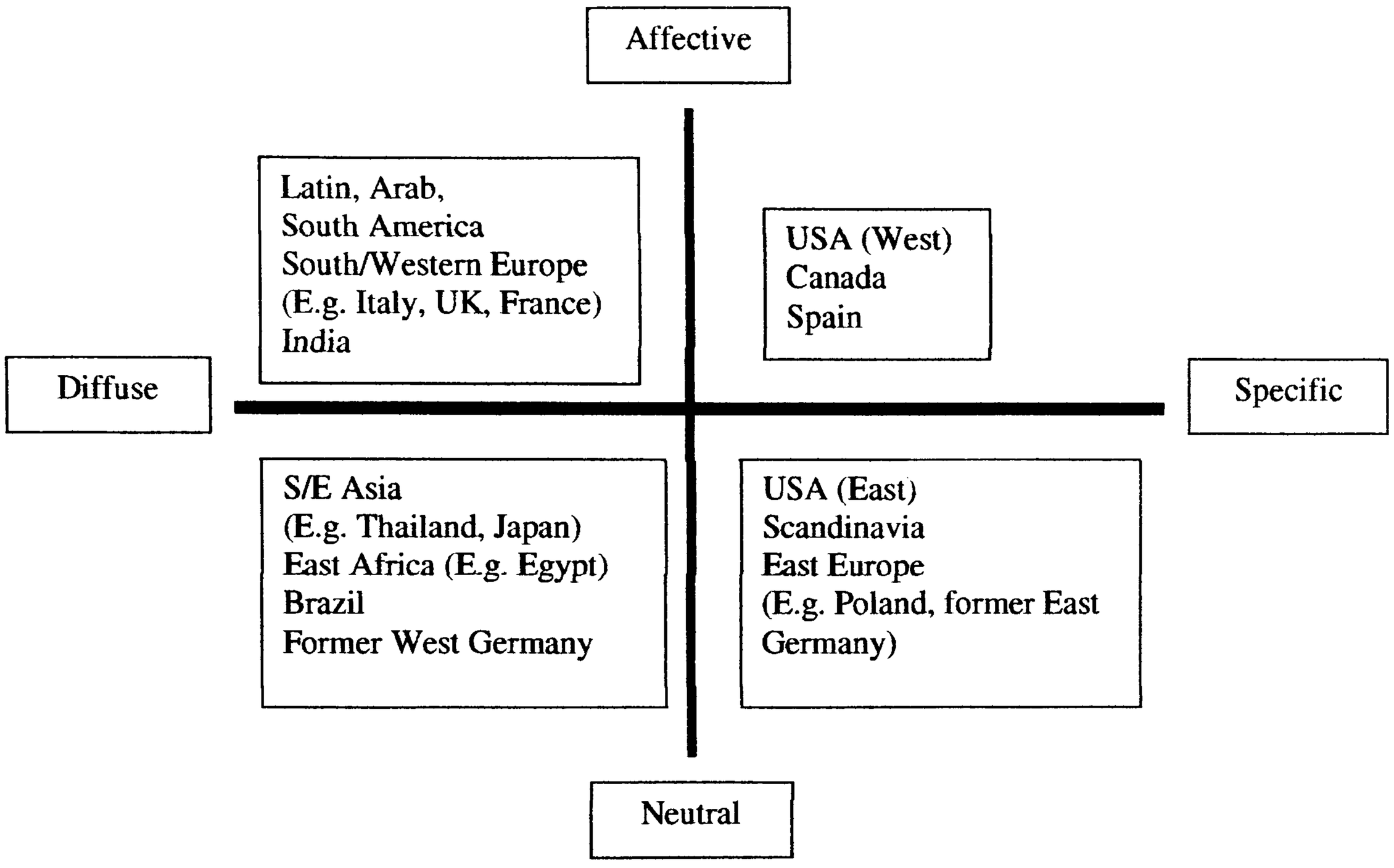

Figure 3.2: Cultural dimensions. Source: Adapted from Trompenaars (1994, pp.96, 97)

(Hofstede, 2001)claims that organizational cultures are not engraved in the employees' values, rather in the practices they have to undertake. Consequently, organizational cultures are more manageable and can be reasonably uniform even though they could be drenched in distinctive national cultures.

(Shields, 1998) argues that there will be an increasing divergence in management accounting practices/applications across industry lines in spite of the narrowing down trend in national differences in management accounting. The drivers of this variation/industry divergence will be forces like customer demands and preferences, competition, regulations, uncertainty, technology, competitive strategies, and

organizational designs. Amazingly, this list of forces driving towards industry divergence is almost the same for the forces of national convergence (Abdel-Al 2006).

Shields (1998) goes on to ascertain that these differences will affect the demand for and the design and use of Full vs. variable costing, activity based costing, target costing, product life cycle accounting, budgeting systems, value chain accounting, performance measures and other traditional and advanced management accounting practices.

7 Management accounting in developing countries

According to (Zearban, 2002), Developing countries are not uniform. These will be found mostly in Africa, Asia, Latin America, and the Middle East. Even though some of these countries enjoy a very high Gross National Product (GNP) (i.e. Kuwait & Saudi Arabia), they still are considered developing countries.

These countries differ in terms of population, culture, access to natural resources, economic and political systems. On the other hand, they share some mutual characteristics like the unbalanced distribution of income and wealth, exports concentration on agricultural/mineral products, several weaknesses in their industries, and the-bigger imports than exports- volume.

(Wallace, 1990) asserted that although -during the past two decades- there existed studies on accounting in these countries, research in this area is still a "recent field of study".(Lin and Yu, 2002) argued that the application of management accounting and accounting practices in developing countries is still unsatisfactory and that studies in that area are still infrequent in the literature.

In his examination of the transfer channels of accounting practices, (Hove, 1986) argues that existing accounting practices in almost all developing countries were imposed by

colonialism. Further more, Briston (1990) criticized the evolution of accounting in both Nigeria and Indonesia and pointed out the legal impact of colonialism. He goes on to state that these countries adopt accounting principles and practices that evolved to satisfy the UK & the US needs. He says "*Instead of seeking to influence other countries to adopt the US/UK systems, it would be better, first, to consider the accounting needs of each individual country, and, second, to question whether the US/UK system is an appropriate model even for developed countries*". He goes on to say "*The accounting practices and principles of one country have not been 'sold' to another country on the basis of convincing arguments in support of those principles and practices, rather, principles move from one country to another when two conditions have existed: that the second country had no organized body of accounting, and that large amounts of capital from the first country were invested in business in the second country, with the consequent ability on the part of those investors to impose their own accounting requirements*". (p. 190)

Trans-national corporations represent the second accounting practices' transfer channel into developing countries. This transfer is made to serve the interests of the international business without much regard to what could benefit the developing country/s or to what is suitable into their local systems (Seidler, 1985). International businesses justify this mandate as needed to facilitate international trade (i.e. capital flow and foreign investment decision making)(Zearban, 2002).

(Perera, 1989) added that as colonialism expanded and the number of companies doing business overseas, the need to establish professional accountancy institutes and bodies (i.e. Institute Of Chartered Accountants, and The Chartered Institute Of Management

Accounting) in developing countries emerged. These institutes constituted the third channel of accounting practices transfer from developed to developing countries.

A fourth channel of transfer is through economic aid. International Development Organizations such as the World Bank, the International Monetary Fund, and United States Aid impose certain accounting practices on third world countries (Hove, 1986). As mentioned before, these practices do not have to be suitable for the developing countries' conditions as much as to comply with the donating countries (developed countries) rules and regulations.

In their study of management accounting practices, Lin & Yu (2002) proved that management accounting could play an important role in improving business management and profitability in China or other developing countries while taking into consideration the national (local) business environment. They used the Institutional Isomorphism theory which has as a principle that "*business firms shall be motivated to adopt management accounting innovative practices when they face significant changes in their respective social and business environment or when they need to overcome a 'performance gap', taking into consideration that the adoption of such innovative practices must be feasible and desirable for developing countries' conditions, culture, and business environment*"(Abdel-AL, 2006).

In spite of the opinions of Muller (1992), and Most (1994) that viewed the harmonization of accounting practices as a necessary condition to facilitate international business transactions, help capital markets' growth, and improve resource allocation, this particular study [Lin & Yu (2002)] ascertains Hove (1986) claim that it is important for

developing countries to have a voice and influence over which accounting systems and practices they will apply instead of copying them -as is- from developing countries.

8 Management accounting in transition economies

(Jaruga, 2002) stated that the growth of privatization, deregulation, international business, global competition, and new information and production technologies have changed the world of management accounting. These changes have special implications for transitional and newly industrialized or emerging economies (Abdel-AL, 2006).

Many transition economies i.e. China, Russia, Eastern Europe countries, India, and Egypt have seen unprecedented accounting policies' experiments. These experiments aimed to install social, political, and economic reforms in developing market economies to ensure that efficient (suitable) management accounting practices are injected into these economic systems (Ho, 2002).

From a different point view, transitional / developing economies witnessed some unfavourable phenomena such as high inflation rates, market loss, and increasing interest rates during their periods of reform. Therefore, the development of management accounting systems and practices was hard to sustain leading to the need to use more sophisticated policies in order to improve economic performance. Consequently, national policies had to be loosened up to allow the experimentation of western management accounting practices(Abdullah, 1992, Jaruga, 2002).

(Ittner and Larker, 2001, Vamosi, 2003) mentioned that most firms in transitional/emerging economies are still strongly conservative in terms of using advanced/innovative management accounting techniques (i.e. Activity Based Costing, the balanced scorecard, and economic value performance measures). A main key to success

under these conditions of transition is the ability to implement management accounting systems and practices that are adjusted to fit the type of reform in progress. The goal is to provide relevant, timely, and accurate internal management accounting information to decision makers.

In his study of a Hungarian organization, as an example of a business within an economy under transition, Vamosi (2000) (p. 57) said "*The point of departure is to understand what management accounting is and what role it plays in a transition company, then to explore how institutional changes affect agents' ways of thinking (rationales), especially how meaning is ascribed to the new rationales, if any, in management accounting*". In light of the previous argument, Vamosi's institutional and sociological approach abandoned the idea of absolute rationality aiming towards understanding why rationales look the way they do, how they result in organizational logic and why it may be a problem to abandon, substitute, alter or substitute one logic and rationality with another when a set of logics is socially, organizationally and individually institutionalized and consequently dealing with issues concerning the relationship between the introduction of managerial practices and cultural settings (Smith, 1998) . In other words, researchers should strive to investigate how a micro-social system -management accounting in a transition company-is constructed, institutionalized, changed and interpreted in the midst of dramatic macro-institutional and social changes in the company's environment.

9 Conclusion

Change is part of everyday life. Be it organizational, departmental, social, entities have to cope with it. In our situation, we are interested in management accounting change. Management accounting is considered a major part of the modern organizational decision

making systems. This part interacts with other internal and external pressures. These pressures constantly try to influence the management accounting system applied and ultimately, the decision making process. The way the system deals with forces of change depends on the prevailing institutions dominating the environment within the organization. Some researchers argue that the new modified techniques would be adopted as a window dress with no real application, or in other words decoupled from reality. Others would argue that the newer techniques will engrave themselves into the current system and ultimately become part of the norm, or in other words they are institutionalized. Either process does not have a definite path to go through, rather the outcome will depend on how robust the current institutions are and how compelling the outside pressures can be. The ideas of equilibrium and rationality can not be applied in this context; hence the NEO-OIE (Scapens 2006) combined Old Institutional Economics and New Institutional Sociology ideologies.

In the next chapter, the researcher will discuss Target Costing as a current management accounting technique.

Chapter 4

Target Costing

1. Introduction

Previously, the researcher discussed management accounting as a concept, and differentiated between it and cost / financial accounting. Chapter three was concerned with Management Accounting change.

This chapter is concerned with the introduction and discussion of Target Costing, its principles, goals, process, strategy, implementation, focus, advantages, and concerns.

2. Target Costing {Genka kikaku}

(As a strategic management accounting/cost planning technique)

Target Costing is best described as "*a systematic process of cost management and profit planning*" (Swenson et al. 2003). It could also be defined as "*a costing technique that uses the following formula to calculate an allowable cost to be achieved during the product development process*":

Maximum allowable cost price = Attainable selling price - Required profit margin

Cooper defines target costing as "*a disciplined process for determining and realizing a total cost at which a proposed product with specifies functionality must be produced to generate the desired profitability at its anticipated selling price in the future*" (p. 23)

A different definition is provided by Cooper et al. (1997). They defined target costing as "*a feed forward cost management technique as opposed to the more traditional feedback techniques used to manage costs during the manufacturing stage*".

As it focuses on long-term cost management efforts, target costing is considered to be a strategic management accounting system. (Ewert & Ernst, 1999; Guilding et al., 2000).

Furthermore, Dekker (2003) stated that target costing could be part of a broader product cost management process called *Target Cost Management (T.C.M.)*

Ewert & Ernst (1999) characterize the essence of target costing by three elements:

Market orientation [selling price is the starting point for determining the target cost],

Coordination function [target cost coordinates the activities of product designers], and

Strategic learning [it influences the long-term cost structure (among other interacting factors)]

Even though Target Costing is a Japanese devised technique, one could expect that the drivers for using target costing are not specific to the Japanese environment. These drivers could be used in a non-Japanese situation even though the actual application of such practices may deviate from the way Japanese firms use them.

Kato (1993) asserted that target costing is an important technique for managing product costs during the design stage. The above equation is concerned with setting an achievable target cost in the product development process, such that a sufficient profit margin is realized when the product is introduced into the market. The main idea in managing costs during product design is that after the product development stage, most costs would be **designed** into the product, and during the production stage, they cannot be significantly influenced anymore.

Cooper and Slagmulder (1997) discussed that central to the target costing concept is "reverse costing" in which an estimation of the attainable selling price and the required profit margin are used to determine the allowable cost for a new product. This mechanism is referred to as "market driven costing" in the accounting literature.

In the product-level target costing, cost pressures are transmitted to the product designers to discipline and focus their creativity to the cost side of the product.

Once this process is accomplished, and the target costs for designers are set, then component level target costing is used to discipline and focus suppliers' creativity to devise methods to design and manufacture components that meet the target costs and required quality and functionality, while still realizing an adequate profit margin. The following table summarizes the process of target costing from Cooper and Slagmulder perspective.

Steps for Target Costing

	Market driven costing	Product level target costing	Component level target costing
Aim	Used to transmit the competitive pressure that the firm faces in the marketplace to its product designers and suppliers.	Determine the nature and extent of the information collected about historical cost trends and customer requirements.	Shape the amount of information that the firm has about the costs and design capabilities of its suppliers. Create pressure on the suppliers and focus their creativity on reducing the costs of the components they supply.
Output of target costing step	Allowable cost. (This cost is set by the market and does not incorporate the capabilities of the firm or its suppliers)	Product level target cost	Component level target cost. (Establish the price that the firm is willing to pay for each of the externally acquired components in the new product)
Factors influencing the target costing process.	**Intensity of competition** (Influences how much attention the firm is paying to competitive offerings in the target costing process) **Nature of the customer** (Degree of customer sophistication. Rate at which future customer requirement are changing. Degree to which customers understand their future product requirements)	**Product strategy** (Establishes the number of products in the line, the frequency of re-design, and the degree of innovation in each generation of the product) **Product characteristics** (Complexity of the product, the magnitude of the up-front investments, and the duration of the product design process)	**Supplier base strategy.** **Degree of horizontal integration** (Captures the percentage of the total cost of the firm's products that are sourced externally) **Power over suppliers** (Establishes the ability of the firm to legislate selling prices to its suppliers) **Nature of supplier relations.** (The degree of cooperation that the firm can expect from its suppliers and in particular the amount of design and cost information sharing)
Factors' importance	Factors determine how difficult it will be to ensure that products are successful when launched, and consequently, the degree of the	These factors help determine the nature and extent of the information collected about historical cost trends and	The supplier base strategy helps determine the benefits that can be derived from component level target costing because it outlines the amount of information that the

	benefits derived from Target Costing. Determine the nature and extent of the information collected about the customers and competitors in the part of target costing concerned with market analysis.	customer requirements. Product strategy identifies the number of products in the line, the frequency of the re-design, and the degree of innovation in each generation of products. The characteristics of the product include the complexity of the product, the magnitude of the up-front investments, and the duration of the product design process.	firm has about the costs and design capabilities of its suppliers.

Figure 4.1: Adapted from Cooper & Slagmulder, 1997.

They went on to assert that there were three product-related characteristics called "**The Survival Triplet**" that play a critical role in determining the success of the firm. These are shown in figure (4.2).

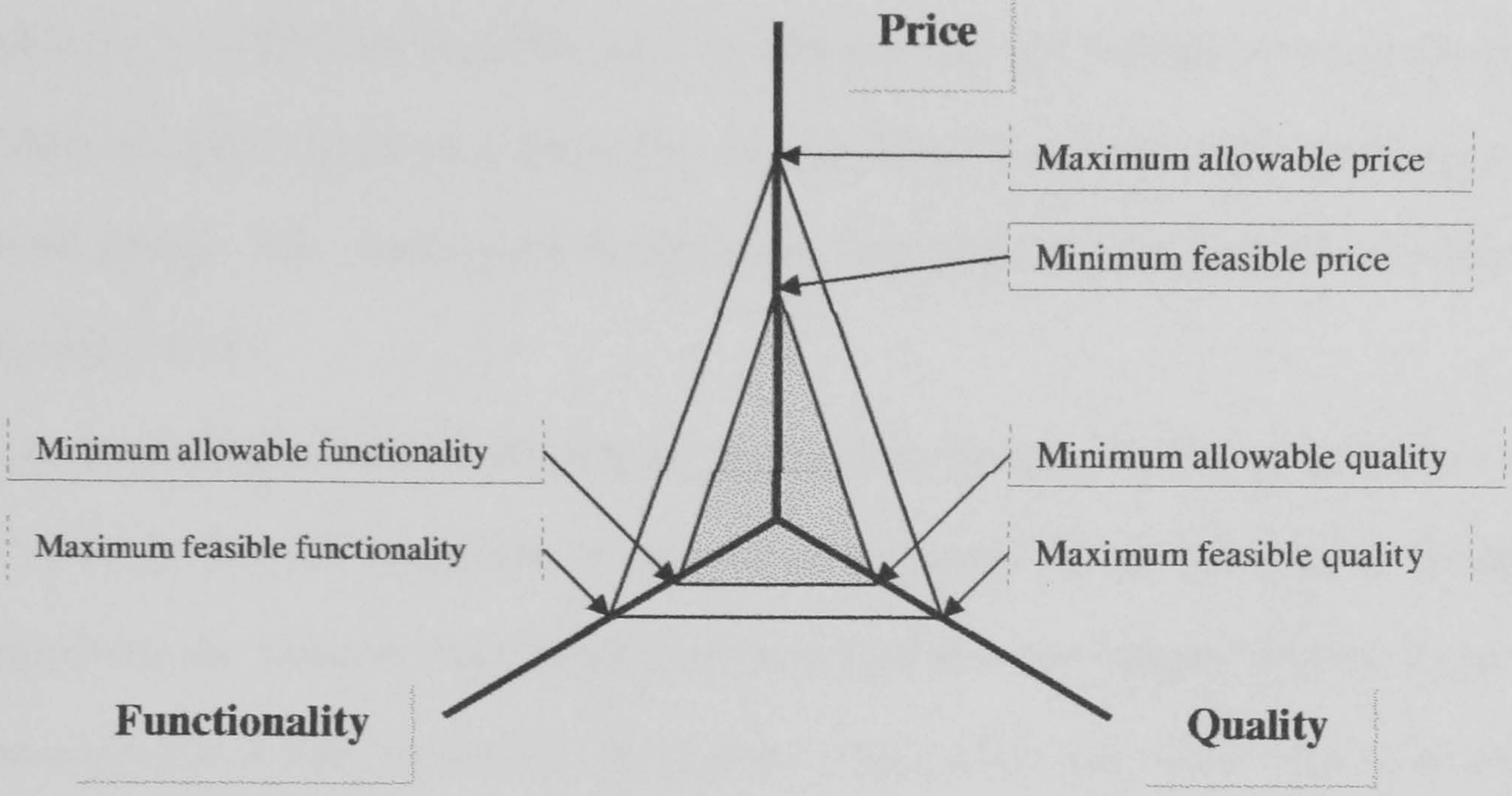

Figure 4.2: Adopted from Cooper & Slagmulder, 1997.

The product survival zone is enclosed within minima and maxima of the three elements. For example, the minimum allowable functionality is the level of functionality under which the customer will not accept the product. On the other hand, the maximum feasible functionality is the level of functionality over which it would be costly to operate if the organization wishes to maintain customers by charging prices they are prepared to pay. There is no perfect balance between the three elements for all firms, and even for similar products as conditions differ between companies, environments, customers, and products. The factors mentioned in the previous table can influence the target costing process in many ways. Some may alter the width of the survival zones (intensity of competition, customers' sophistication). As survival zones narrow, it becomes more difficult for the firm to launch successful products. Moreover, some factors may alter the rate of change

and ease of prediction of the location of survival zones (rate of change of customer requirements, and customers' understanding of their future requirements). The quicker the survival zones move and the lower the ability to predict their future location, the less likely the firm will be able to launch successful products.

Copper et al. (1997) asserted that there is evidence that the benefits of target costing increase in such environments where there is greater coordination between marketing and product design. This coordination increases the likelihood that the product will satisfy customers' needs.

Other factors help *determine the product development budget* (number of products, rate of re-design, and the magnitude of up-front investments). In the same study, Cooper asserted that the value of target costing processes increases as budgets increase because more capital is at risk. Factors like the degree of innovation, the firm's experience with technologies, the complexity of the product, and the degree of horizontal integration greatly influence *the ease to predict future costs* which in turn affects the effectiveness of the whole target costing process.

2.1 Principles

According to (Swenson et al., 2003), the six key principles of Target Costing are: (1) Price led costing where market prices are used to determine the allowable costs; (2) Focus on customers where customer requirements for quality, cost, and time are simultaneously incorporated in product and process decisions and guide cost analysis. The value -perceived by customers- of any features and functionality built into the product must be greater than the cost of providing those features and functionality; (3) Focus on design where cost control is emphasized at the product and process design stage. Therefore, engineering changes must occur before production begins, resulting in lower costs and reduced "time to market" products; (4) Cross functional involvement

where cross-functional product and process teams are responsible for the entire product from initial concept through final production; (5) Value chain involvement where all members of the value chain –i.e. suppliers, distributors, service providers, and customers- are included in the target costing process; and (6) A life-cycle orientation where Total life-cycle costs are minimized for both the producer and the customer. These include purchase price, operating costs, maintenance, and distribution costs.

2.2 Goals

According to AICPA (2000), the core objective of target costing is to enable management to use proactive cost planning, cost management, and cost reduction practices through which costs would be planned and managed out of a product and business early in the design and development cycle, rather than during the later stages of product development and production.

According to the study led by Swenson et al., Companies use target costing to establish concrete and highly visible cost targets for their new products.

In another study led by Dekker, and Schmidt, the authors stated that the product development process is characterized by multiple, and possibly conflicting goals such as realizing low cost, high quality, customer satisfaction, and timely product introduction.

Target costing as a disciplinary mechanism contributes to realizing these different goals by having product designers make explicit tradeoffs between them. The overall main goals of target costing are to secure that no unprofitable products are introduced to the market, and to realize an optimal trade-off between cost, functionality, and quality (Cooper, 1995).

2.3 The process

The target costing process begins when top management establishes a target cost for a new product i.e. a car, a computer.

A cost estimating group will then decompose the target cost for the product as a whole into cost targets for sub-assemblies and individual component parts –engine, seats, processor, modem.

Frequently, a gap would exist between the target cost and cost projections for the new product based on current designs and manufacturing capabilities. Central to the target costing process is closing this gap through cost management/reduction.

For this gap to be closed efficiently, cross functional target costing teams analyze the product's design, raw material requirement, and manufacturing processes to search for cost savings opportunities.

2.3.1 Departmental functions/roles

As stated in the previous section, a cross functional team is responsible for the entire product from initial concept through final production. This team will include research and development, design, engineering, production, supply management, and frequently suppliers' representatives.

For example, U.S. operations for Daimler Chrysler have five platform teams that cover large cars, small cars, mini-vans, trucks, and jeeps. Each team is cross functional and includes members from design engineering, manufacturing engineering, purchasing, production, and finance. The target costing system determines cost objectives and performance goals for each platform team, and meeting these goals is an important component of team members' annual performance reviews.

2.3.1.1 From a Marketing point of view

(Friedman and Lewis, 1999) stated that when asked for advice on pricing products (step one in the target costing process); *accountants* tend to focus on costs when trying to advise management on appropriate pricing strategies. *Economists* might focus on rules for maximizing short-run profits (i.e. marginal revenue = marginal cost). *Marketing*

executives, on the other hand, are more likely to focus on the different consumer segments since they are more in sync with the idea of market segmentation. In the process of deciding the attainable selling price, marketing segmentation arises as an Integral part. It involves dividing the market into distinct groups of customers, each with their own needs, and considering each as a possible target market. The organization, then, decides which segment/s to target, and researches the "would be" most acceptable price that customers will be willing to pay.

Different factors exist that would allow the firm to demand different prices for its product which are faster delivery, higher quality levels, variation (software versions), warranty to name a few.

2.3.1.2 From and R&D / Product development & design point of view

The research & development, and the design departments use value engineering, and value analysis techniques to increase the product's value to customers through improved design. A critical point that has to be closely monitored is that, more than likely, changing the design of a certain product will require new tooling, and therefore the re-design course of action could become expensive which defies the spirit of target costing. Therefore, the firm has to make sure that the customers' perceived value of the re-design should exceed the increment in cost caused by the new tooling.

Kaizen is the term used to promote the concept of continuous improvement. This process of continuous improvement is most effective after a new part is designed, and before the manufacturing process begins. Through this stage of the product's life cycle, setups, assembly, and process flows should be simulated and optimized before expenses are incurred.

2.3.1.3 From a production / manufacturing point of view

The production and/or manufacturing departments' role comes after the proper price is set, and the design is agreed upon and deemed feasible. The leaner and more flexible the department is, the more the benefits the firm can reap. The firm's supply chain should be closely incorporated in this process.

Among the benefits that the firm can enjoy are improved material flow, the elimination of unnecessary inventory movement, reduced setup times, and optimization of the workforce.

(Gagne and Discenza, 1995), argue that today's business environment is rapidly changing. Product innovation is one of the keys to a company's survival and competitiveness. Manufacturers can no longer produce and market large volumes of standard products with a relatively stable market and technological climate, but rather there has been a shift towards unstable, rapidly changing markets and technologies. Measurement and cost control systems must be designed to motivate the desired and irreplaceable customer oriented behaviour in order to implement market-driven management across the organization. Management accountants also need to modify cost methods to promote the successful introduction of new products.

Several researchers (Ansari and BELL, 1997, Fisher, 1995)); Schmelze et al, (1996) noted that changes in the current economic and competitive conditions created a need for a market oriented cost management system. Moreover, the increase in the number of competitors, the high standards of competitors, the globalization of the current economy, the aggressive price competition, shorter product life cycles, and the high rate of technology diffusion and innovation mandated the adoption of effective, efficient, and optimized processes in order to deliver the highest possible quality products at the lowest possible costs. Additionally, information systems are evolving from a traditional view of cost accounting –internally focused on cost centres, and pre-set accounting periods- to a

market driven system that focuses on production processes, and that has a forward-looking, life cycle orientation.

Target Costing should not be looked at as a costing system like activity based costing, or absorption costing, for example, but rather it is a program aiming to reduce life-cycle costs of new products, while securing customer requirements of quality and reliability (Kato, 1993).

(Everaert, 1999) warned that target costing is **not** a costing system like full costing, direct costing or activity-based costing. (Brausch, 1994) clarifies that the target costing system does not have an impact on how costs of products are calculated, but rather affects the way in which costing information, already available, is used. In the early publications, other names were used for target costing systems such as "cost planning" and "cost projection systems".

In her definition, (Everaert, 1999) sums up the features of target costing as "*a management accounting process that aims for downstream cost management cf future products*". It encompasses the process of determining the target cost as well as the process of supporting the attainment of that target cost during new product development (NPD). Target costing information is provided to motivate design engineers to implement cost reduction ideas (without injuring the quality of the future product or the projected time-to-market) in order to secure the profitability of the future product when it is launched to market. The most important target costing piece of information is the target cost, which is based on market data and the company's profit requirements.

The consortium for advanced manufacturing defines the target costing concept as a representation of a set of management tools and methods designed to direct design and planning activities for new products, provide a basis for controlling subsequent

operational phases, and ensure that products achieve given profitability targets throughout their life cycle.

From a different point of view, (Bayou and Reinstein, 1998) stated that target costing is neither a specific tool, nor a concrete technique, but a general approach or philosophy that, to reach predetermined goals, can follow three routes: Cost improvement, cost cutting, and cost shifting. They go on to confirm that traditional standard costing motivates managers to operate at static, standard cost levels. Target costing (TC) and Kaizen costing (KC), on the other hand, consider standards only as interim objectives, and stress continuous, dynamic cost improvement. (Makido, 1989) argues, "*The essence of cost reduction is to cut the present cost standards themselves*".

2.4 Target Costing and strategy.

Adopting any management accounting system in any organization can be closely linked to the organization's strategy. Target costing being one of these systems is no different. (Hibbets et al., 2003) stated that researchers investigating target costing (TC) frequently have identified a link to firm strategy as a defining factor of this cost management tool. (Ansari and BELL, 1997, Cooper and Slagmulder, 1997) stated that target costing is intimately linked to an organization's competitive strategy. (Thompson and Strickland, 1996) stated that the competitive strategy that a corporation might choose to follow identifies the manner with which management intends to compete successfully in its markets and provide the best value to their customers. When mentioning strategy, we refer to (Porter, 1985) analysis of the basic strategies of "Cost Leadership" and "Product Differentiation", and (Cooper, 1995) "Confrontational Strategy".

(Castellano and Young, 2003b) indicated that the basic premise of a confrontation strategy is that it is not possible in today's global economy for any firm to sustain a long-term competitive advantage. They went on to say that in order to compete successfully,

an organization must confront its competition in the three key areas of quality, functionality, and price.

2.4.1 The competitive environment

The organization's choice of a certain strategy is influenced by the competitive pressures in its industry. In spite of the fact that these pressures are not the same for different industries, (Porter, 1979) showed that there are some -similar enough- features of pressure to develop a common analytical framework for competitive analysis. The five competitive pressures contained in this model are... the intensity of rivalry among competitive sellers, the threat of potential new entrants, the threat of substitutes, the power of key suppliers, and the power of key buyers. Thompson and Strickland (1996) ruled that the stronger the competitive forces, the lower the collective profitability of participant firms.

Ansari and Bell (1997), affirmed that the main reason a firm's competitive strategy is closely linked to its use of target costing is the capability of the later to provide the method for achieving the firm's goals of fulfilling the market demand while accomplishing an acceptable profitability level. They went on to say that a target costing system helps organizations manage their future profits by combining several strategic factors in order to satisfy customers, gain market share, generate profit, and plan and control costs.

In their investigation of the link between target costing and firm strategy, (Hibbets et al., 2003) concluded that there were preliminary evidence, through interviews conducted with managers of twelve U.S. and German based target cost adopting companies, showing product differentiators to be more likely to implement target costing than firms pursuing other competitive strategies (i.e. cost leadership or confrontational strategies). Also, overall competitive forces tend to be stronger.

Of the competitive analysis factors affecting the environment, they concluded that rivalry among competing sellers appears to be the driving force behind the strong competitive environment faced by these firms, followed by supplier power to impose pricing conditions.

Since target costing is applied to new product planning, which frequently requires the investment in tools, equipment, and other assets that influence costs, then it can be said that price drives both costs and investment.

(Ewert and Ernst, 1999) featured target costing as a strategic management accounting tool because it Changes focus from costs determined within the firm towards costs allowed by the market (*Market orientation*), and it is a tool to co-ordinate efforts within the firm to reach the allowable costs. (*Effort co-ordination*). Moreover, it focuses on long term cost management rather than the short-term focus adopted by more traditional cost accounting systems.

2.4.1.1 Value engineering & value analysis

The company's total costs consist of upstream and downstream costs. **Upstream costs** are incurred at the product development stage (including design, research & development, and product planning). **Downstream costs** consist of expenditures on manufacturing and operating activities (Kato, 1993).

Target costing is "*The system to support the cost reduction process in the development and designing phase of an entirely new model, a full model change, or a minor model change*". Kaizen costing is "*The system to support the cost reduction process in the manufacturing phase of the existing model of product and is also relevant to other downstream (i.e.: non-manufacturing) costs*" (Monden and Hamada, 1991).

Employed along with these techniques are the concepts of value engineering (VE), and value analysis (VA). While VE can be performed before, during and after the design phases, 50% of VE activity hours are spent in the design phase (Tanaka, 1989).

VE refers to cost improvements through basic functional changes in the new product development stage, while VA refers to cost improvements requiring design changes (Monden and Sakurai, 1989).

2.4.1.2 Cost improvement, cutting, shifting.

A target Costing project entails a process of directing changes in the physical (i.e.: a product and its components) and monetary dimensions of costs, towards a preset point or range of points. The relation of Cost reduction to Cost improvement is not one of interaction but rather is one of dependence (Bayou and Reinstein, 1998). Cost reduction often results from a cost improvement program, however, cost improvement does not always lead to Cost reduction. On the contrary, Cost improvement may increase costs. (Example: in the design stage, a cost improvement plan may suggest an upgrading in one of the product features when its relative cost is significantly less than its relative value perceived by the customer). Cost improvement refers to cost development through employing a structure that connects costing, pricing, market share, normal profit margin, and long term investment into a unified entity. Bayou and Reinstein used the term cost reduction only when it resulted from cost improvement; otherwise, they called it *cost cutting* or *cost shifting*. Cost cutting entails slashing costs without going through total cost management. Thus the decision to reduce last year's actual total cost -by 20% for example- is a cost cutting judgement, which may still be called target costing.

Cost shifting differs from cost improvement in that the former is not implemented on the basis of TCM. It differs from cost cutting in that cost cutting is a movement down the same cost curve. Cost shifting is a leap from one cost curve to another. Normally cost

improvement, cost cutting, and cost shifting are relative concepts locating on a continuum rather than forming discrete and exclusive ones. Furthermore, these three cost concepts have general tendencies: Cost improvement is **suggestive,** Cost cutting is **assertive**, and Cost shifting is **evasive**. Suggestive: because it incorporates many recommendations made to top management by many people in R&D, marketing, manufacturing, accounting and economics. Assertive: because cost cutting decisions are imposed from top down in order to reduce losses or increase profits. Decisions usually move in one direction without sufficient justification or employee participation. Evasive: because of the switching from the current cost curve to a completely different curve without going through a program of strategic improvement.

2.5 Implementation of Target Costing

Most researchers who have discussed target costing agreed that it is an *outside-in* type of process. Figure 4.2 displays a general summary of the target costing process.

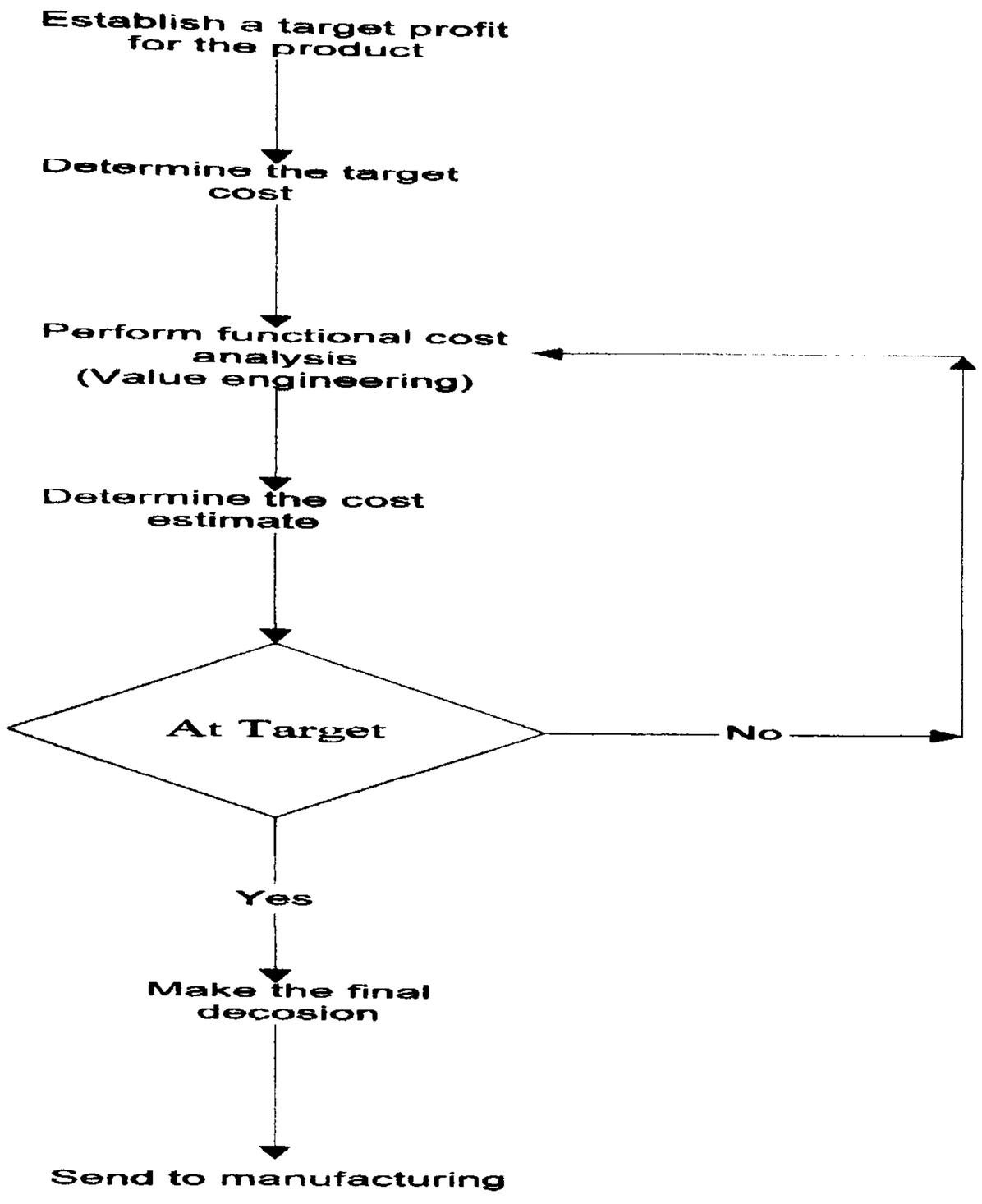

Figure 4.3: Target costing process. (Adapted from Gagne & Discenza 1995)

In the past, companies depended on the introduction of new products and on customer loyalty to recover their R&D and other costs. Now, because of the rapid introduction of imitated "me too" products by "lean competitors", leading companies have no choice but to manage costs from the design phase onwards and to launch products at prices that will ensure sales to broad segments of customers. This in turn will generate more income that will enable the fast recovery of costs in addition to building customer loyalty and increasing market share (Cooper and chew 1996).

(Tani, 1995) stated that Target Cost Management is concerned with simultaneously achieving a target cost alongside the planning, development and detailed design of new products by using methods such as Value Engineering (VE).

(Kato, 1993); (Cooper and Slagmulder, 1997) stated that Cost Management is an important element for the survival of organizations in the present highly competitive environment.

A fierce competition dictates that costs be trimmed down and strictly controlled. (Everaert and Bruggeman, 2002) ascertain that the active pursuit of opportunities to lower total costs has traditionally focused on **existing** products, then went on to say that the Target Costing approach has recently been described in Management Accounting literature as a way to reduce costs of **future** products, i.e. reduce costs while the new product is still in the new product development process (NPD).

2.5.1 Conditions / characteristics of target costing

According to Everaert 2000, there are seven typical characteristics for target costing. These conditions are discussed below.

2.5.1.1 The target sales price is set in a market-oriented way during product planning.

Being a market oriented philosophy, determining the target sales price is the target costing process starting point. This implies that the target sales price is decided during product planning, when the characteristics of the future product are being determined. (Cooper and Slagmulder, 1997) found that the target sales price is set realistically in companies using target costing, and that the process of setting the target price is undertaken very thoroughly. (Kato, 1993) explains that the sales price of existing products and/or the competitor's price level generally constitute the fundamental starting point for firms adopting target costing. A higher requested price is only justified if the perceived value by the customer is higher than the value perceived from existing products or competitor's offerings (Differentiation).

Apart from product specifications, (Ansari and BELL, 1997) found that Japanese companies use four key determining factors in setting the product's price in a target costing environment. (a) The consumer needs/wants/tastes concerning the product characteristics such as performance, features, conformance, durability. (b) The customer's willingness to pay for these characteristics. (c) The estimated prices of competitor's rival products and (d) the required market share for future product/s.

2.5.1.2 The target profit margin is determined during product planning, based on the strategic profit plan

The second characteristic of a target costing system is the early establishment of the targeted profit margin during the product planning phase. Kato (1993); (Monden and Hamada, 1991) stated that the target profit margin for a particular future product should be derived from the corporate strategic profit plan. They explained that the total target profit for future products should be derived from the organization's medium-term profit plans, reflecting management and business strategies over a period of three to five years. This "overall" target profit should then be broken down into target profits for each product spread over its expected life cycle. Coupled with estimations of future sales volumes, the target profit for each future product can then be converted to a target profit margin. Kato (1993) admitted that it would be a difficult task to visualize an accurate future product situation in the current competitive and uncertain environment, but added that without doing so, it would be impossible to decompose the total target profit into targets for each product. Furthermore, Kato (1993) warns that the procedures to come up with target profits should be scientific, rational and agreed upon, in order to secure all participants' adherence to the plan to achieve the target profit. (Kato et al., 1995) found that in companies applying target costing, the profit allocation to the various products is a

strenuous mission that consumes many hours of management discussion before top management declares the final allocations.

(Horvath, 1993, Makido, 1989) described another method to determine the target profit margin. They argued that because the target price is obtained from the market, the application of a certain return on sales calculation should –logically- be a suitable way to specify the target profit. According to Horvath (1993), return on sales is set by management, based on long-term profit planning and depending on factors like corporate strategy, business sector and competitive situation. To Makido (1989), return on sales (the target profitability index) tends to be based on that of similar existing products.

2.5.1.3 The target cost is set before the new product development process (NPD) starts.

The fundamental and most well established characteristic of the target costing process is that it is set early in the new product development process, before design and developing actually starts. The decision on the appropriate level of the target cost for the new product involves a number of calculations. First, the *ongoing cost* is calculated and then the *as-if cost* is estimated. Third, the *allowable cost* is determined and finally the *target cost* is set between the allowable cost and the as-if cost.

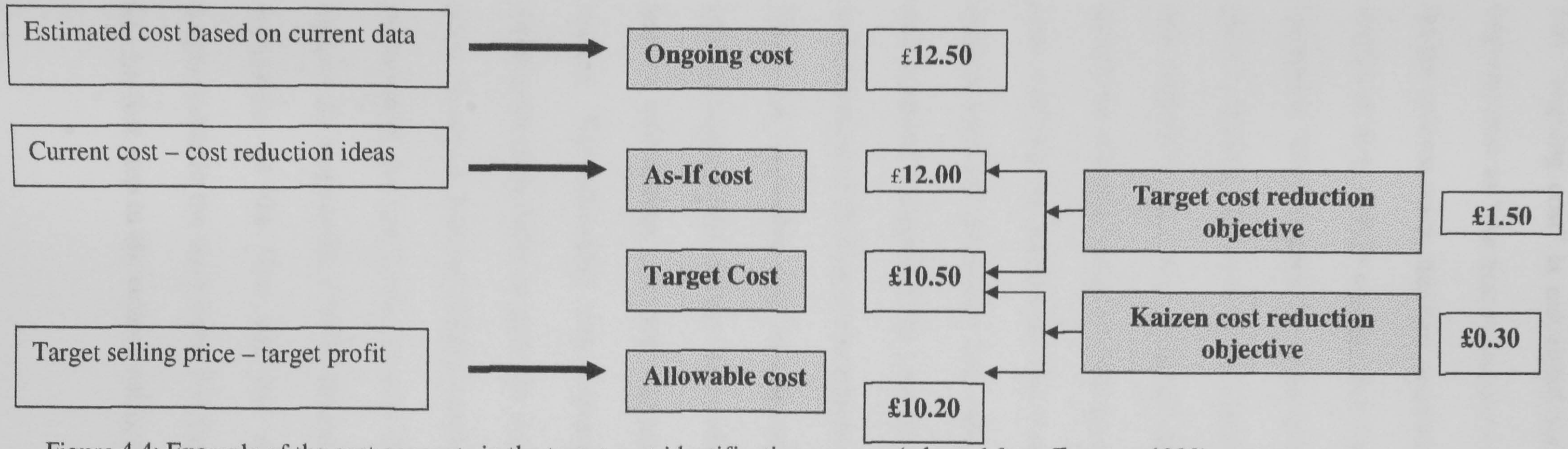

Figure 4.4: Example of the cost concepts in the target cost identification process (adapted from Everaert 1999)

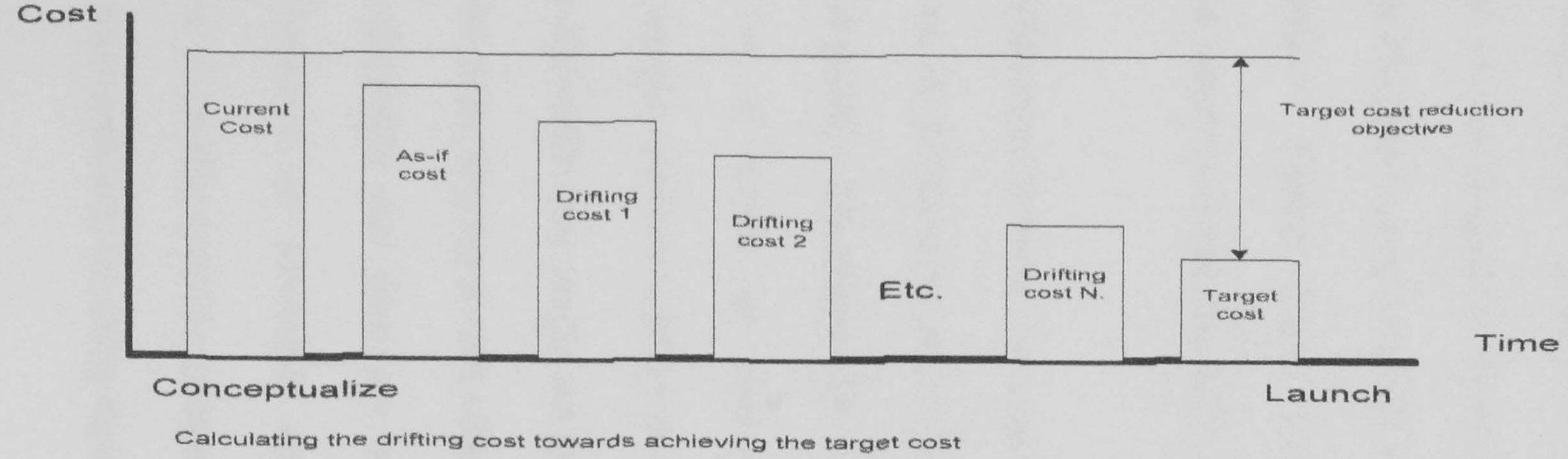

Figure 4.5: drifting costs (Adapted from Cooper & Slagmulder 1997).

The "ongoing cost" is calculated for a future product. (Kato et al., 1995) define the ongoing cost as "*the best estimate of the future product's cost*". When the new product design process starts, this best estimate is based on the actual cost of the current product. Ansari & Bell (1997) explain that this ongoing cost is also called the "drifting cost", because it "drifts toward the target cost through successive design trials during the design phase". Second, the as-if cost is calculated Kato (1993) explained that various ideas for cost reduction might have emerged during the design phase of product development, or during the manufacturing of current products and not yet be applied. Therefore, the as-if cost could also be defined as "*the cost of making the future product if the company had implemented all available cost-reduction activities*". Figures (3&4) show a simple mathematical example of the cost concepts in the target cost identification process, and an illustration of drifting costs respectively.

Third, the "allowable cost" is calculated as the difference between the target sales price and the target profit margin. As mentioned before, the target sales price is set based on market information, and top management strategically determines the target profit margin. The allowable cost represents the cost at which the product must be manufactured in order to gain the target profit margin, if/when sold at the target sales price. However, Sakurai (1989) clarifies that this allowable cost might not be achievable on the short run and forms -in fact- the long-term most important cost objective. Also, Cooper & Slagmulder (1997) argued that the allowable cost does not represent the capabilities of the firm and the suppliers; therefore the allowable cost is often unachievable in the short term. For them, once the allowable cost for a future product is set, the first step in the target costing process is accomplished, or, using their own term,

"market-driven costing" is accomplished. In their next step, called the "product-level target costing", the target cost for the future product is set, while their last step considers dividing the target cost into target costs for components, or the "component-level target costing" part.

Fourth, the target cost is set somewhere between the as-if cost and the allowable cost. Different authors endorse various methods to set the final target cost. According to the deductive method, the target cost is set at the level of the *allowable cost*, i.e. at the difference between the target sales price and the target profit margin. This method is the most commonly described in existing studies and is also called the subtraction or top-down method, since the target costs are more or less imposed on the new product development team. The target cost can also be determined by what the literature calls the adding-up or bottom-up method. Here, setting the target cost starts within the new product development department itself. Kato (1993) explains that for each subassembly or component, the cost is estimated based on the actual cost of current parts. A cost reduction on each part of the new product is taken into account to get the target for each component of the new product. The total target cost is then obtained by adding up all target costs of the individual parts or subassemblies. For Kato (1993) the deductive method is more preferred than the adding-up method. He argues that though the adding-up method is based on the feasibility test of the proposed value engineering improvements, it would be difficult to provide a logical connection with the profit and business plans. Furthermore, in his opinion, innovative ideas for cost reduction seldom emerge with this method. Sakurai (1989) on the other hand, argued that a combination of the top-down and bottom-up methods would lead to the best results. His rationale is that

top management should guard target profits, but at the same time the cooperation of employees is needed to make the target costing process work.

2.5.1.4 The target cost is subdivided into target costs for components, functions, cost items or designers.

For target costing to be efficiently applied, the target cost for the future product needs to be decomposed in order to have specific targets for designers internally and subcontractors externally. Dividing the target cost into target costs for subassemblies is a difficult issue, since it indirectly determines the necessary cost reduction objectives for the different design teams. According to (Tanaka, 1993), simply deciding to reduce the estimated cost for each design team by the same percentage is not a recommended practice. On the same note, (Cooper and Chew, 1996) argue that it makes no sense to apply cost reduction requirements uniformly across all the components. The *function-oriented* allocation and the *component* allocation are the best-known methods for cost reduction.

The Activity Based Costing approach:

Activity-based costing (ABC) is another approach to product costing ((Cooper and Kaplan, 1988, Cooper and Kaplan, 1992). It is based on the following two principles, formulated by Cooper & Kaplan (1991) (a) products create demands for activities and (b) activities -not products- cause costs. Consequently, in an ABC system the activities necessary to produce products are identified, costs are traced to these activities and various cost drivers are used to trace the cost of activities to products. ABC systems are mostly set up to remove much of the distortion in product costing and to gain a better insight into the overhead costs and activities.

(Turney, 1991) explains that the information on activities and cost drivers also facilitate cost reduction, more specifically in four different ways, i.e. by activity reduction, activity elimination, activity selection and activity sharing. He defined **activity reduction** as reducing the time or effort required to perform the activity, **activity elimination** as eliminating the activity entirely, **activity selection** as selecting the low-cost alternative from a set of design alternatives and **activity sharing** as making changes that permit the sharing of activities with other products to yield economies of scale. Similarly, Cooper & Kaplan (1991) discovered that some firms use ABC information to influence the design engineers' behaviour encouraging them to design new products with lower downstream costs. For instance, Cooper & Turney (1988) described how the ABC system provided engineers with a list of all parts and of all the material-related overhead cost associated with each part. This information was helpful in the evaluation of designing a new part versus using an existing common part. The ABC information was an incentive to reduce the number of part numbers, but also to increase the proportion of common parts used in the instruments. Cooper & Turney (1989) described how and why a new ABC system was developed to support cost management of future products. The goal of the new system was to attain the required functionality of a new product with the least expensive design option. This was achieved by choosing drivers that were meaningful to product designers such as the number of insertions; test hours, parts. Etc... so that design alternatives could be compared.

Cooper and Turney (1990) found that the purpose of the introduced ABC system was to induce the engineers to keep cost in the picture, and not to go for what they called "elegance" every time.

Research on the use of ABC information to influence design engineers to induce cost management of future products is not extensive. Only a few case descriptions can be found in existing literature. In these cases, ABC information is mainly used to design new products that are less costly in terms of indirect manufacturing costs (overhead costs), since the purpose of an ABC system is to control the indirect costs. Monden & Hamada (1991) argue that the management of **direct cost** has become extremely important. They stated that the ratio of variable costs to total manufacturing costs has recently increased up to 90, and that the ratio of direct material costs to total variable costs is about 85 % respectively in the car industry.

Cost reduction through cost-effective material selection for instance, will never be induced from ABC information, since the focus of an ABC system is not on the direct costs. Therefore, (Blanchard, 1978) objection on focusing on just one section during the product life cycle (indirect costs) also applies to the ABC tool. Furthermore, (Spicer, 1992) pointed out that ABC cost driver information focused only on internal decision making about product and process design. A market perspective on how far to go with cost management of future products is not included in the information provided to design engineers.

The function oriented method/approach

In the function-oriented method, the target cost is first allocated to different functions of the future product and then to components. (Yoshikawa et al., 1993) explained that the value of a specific function -as perceived by the customer- is the main criterion for the allocation of the target cost to that specific function. They went on to say that setting target costs for functions based solely on the customers' viewpoint may overlook certain

factors such as technical considerations, meeting safety and other regulations. They argue that although the customers' evaluation should remain as the prevailing deciding factor, it is often modified to take into account the manufacturer's evaluation before finalizing the target cost for each functional area. According to Cooper & Slagmulder (1997) it is up to the "major function design" teams to decompose the target cost of the major *function* to the *component* level.

The component method/approach

The second most known allocation method is the component method. In this method, the target cost is allocated to subassemblies, components and parts. (Yoshikawa et al., 1993) stated that for the subdivision to component blocks, the proportion of the current cost of that part in similar existing products is frequently taken into account. Cooper and Slagmulder (1997) pointed out that target costs for components could be set only when the product design reaches the stage at which specific components can be clearly identified. Tanaka (1989) clarifies that the component method is usually applied to new products that are similar in design to previously manufactured products, since the component method is based on historical cost information. For complex, innovative, and large scale products, the functional allocation method is more suitable, since it allows designers as much freedom as possible to be creative in designing new or revised products within the target cost boundaries. Furthermore, (Kato et al., 1995) argue that allocating target costs to product characteristics directly satisfies customer requirements. Contrary to that, and based on surveys conducted by Tanaka (1989), Yoshikawa et al. (1993),and Tani et al. (1994), they found that large Japanese companies using target

costing, tend to assign target costs frequently according to the degree of importance of the functional areas, regardless of the historical cost of the components.

Other cost assignment methods/approaches

Other cost assignment methods include the assignment to *cost items* (materials, labour…) and the assignment to *designers* (Yoshikawa et al. 1993). Monden & Hamada (1991) describe the assignment to cost items such as engine, transmission system, chassis, etc. and then into cost items such as material cost, purchased part cost and direct labour cost. Under assignment to designers, a target cost is first assigned to a large group of designers working on the same subassembly of the product, then subdivided into a smaller group of components and finally required from individual designers.

Ansari & Bell (1997) mentioned that, in most organizations, departments are responsible for the costs of subassemblies, teams are responsible for the costs of components and designers are responsible for the costs of individual parts. However, Yoshikawa et al. (1993) warned that the more the target cost is subdivided, the greater the restrictions placed on the designers and the less likely new ideas will emerge.

2.5.1.5 Detailed cost information is provided during New Product Development to support cost reduction.

(Kato, 1993) argues that information systems such as the target costing support system must provide cost information anytime the designers require them, and not only at the so-called milestones in the new product design process. Ansari & Bell (1997) argue that there exist three types of cost data that need to be collected in order to support cost reduction namely *Feature-cost data*, *attribute-cost data* and *function cost data*. The *feature-cost* data is the customer-focused view of costs providing cost information to

features of a product. *Attribute-cost* data provide an engineering view, which relates cost to the major physical attribute of a product. For example, in the automobile industry, information about how costs respond to weight, volume, area, size, density and speed are commonly provided by the target costing system. *Function-cost* data also have an engineering focused view, providing cost information on the major subassemblies of a product.

2.5.1.6 During product development, the cost level of the future product is constantly compared to its target cost.

This characteristic of target costing involves the comparison of the estimated cost level of the future product with its target cost at different points during product development. (Kato et al., 1995) found that continuous updating of projected production costs for the products under development was stressed. Each business followed a formal sequential process through which costs were estimated at certain critical phases in the process. Also Fisher (1995) found that the target cost calculation sheet with the estimated cost and the target cost for each component was formally completed at least at three different points during product development at Matsushita, Japan. These indicators were set during the product planning phase and before ordering the molds and right prior to full-scale production. Similarly, Kato, Böer et al. (1995) found companies using a standard format for summarizing cost data on a product moving through development. Team members could refer to this document at any time to see the latest estimates of the cost level. Similarly, Cooper & Slagmulder (1997) found that top management continuously monitored the progress the design engineers are making toward achieving the cost reduction objective. This monitoring ensures that corrective actions are taken as early as

possible in order to achieve the target cost. Finally, Fisher (1995) remarks that setting the target cost and calculating the cost is undertaken by separate departments in the organization. For example, at Matsushita, the divisional manager is responsible for setting the target cost, while the chief engineer estimates the cost level.

2.5.1.7 The target cost must never be exceeded.

The general rule that target costs can never be increased requires a strong commitment from managers and design engineers to attain the target cost. Kato (1993) stated that the western idea of a target cost does not necessarily encourage commitment. Inflation and labour costs increases -due to union negotiations- are automatically added to the target cost in the western sense. However, in Japanese companies applying target costing, agreed target costs are final and they are not expected to change. Also, Kato, Böer et al. (1995) argue that Japanese managers make big efforts to hit the target profit, regardless of how difficult the task may be.

According to Cooper and Slagmulder (1997), the general rule that the target cost can never be increased has three consequences. First, whenever costs increase somewhere during the development phase, they have to be reduced elsewhere by an equivalent amount. Second, launching a product with a cost above the target is not allowed; only profitable products are launched. Third, the transition to manufacturing is managed carefully to ensure that the target cost is indeed achieved.

2.6 Focus of Target Costing.

The focal costs of the target costing process are basically things such as material and purchased parts, labour and identifiable overhead expenses (conversion costs), tooling costs, and development expenses and depreciation. It would also be recommended that all

costs and assets that could -and probably would- be affected by early planning decisions be taken into consideration. An example of these costs is indirect overhead expenses through the production stage and beyond (i.e. service costs and inventory that is treated like assets).

2.6.1 Participants power During the Target Costing process

Target costing is a collective effort process. Market analysts, design engineers, production engineers, management accountants, purchasing personnel, and sales representatives have to collaborate to come up with an overall achievable plan that the firm should abide to. Subsequent to exploring the interaction between all human factors integrated in the target costing process, Tani (1995), concluded that the more frequent the development of new products and new technologies in the market was, the more influential the product planning and product managers were in the product planning stage. Also, the influential power of sales managers in the product planning stage increased with the increase in technological innovation frequency. Moreover, sales, product planning, and product managers had more power during the product planning stage when the timely introduction of new products was crucial to competing.

2.6.2 Target Costing and time pressure.

Kato (1993); Cooper (1995); Cooper and Slagmulder (1997), found that assigning a cost target to designers and design engineers during NPD would increase the chance that future products would have lower product costs than if the product engineers had no specific cost targets.

When taking time pressure into consideration, Kato pointed that -since a big part of the NPD process and activities is human dependent- reduced development times create time pressures for design engineers. He carried on to say that design engineers might then sacrifice quality in order to attain the cost targets within the specified time frame. Furthermore, Kato speculated that because of the human factor associated with the creativity involved in developing new products, that excess pressure for reducing development time under target costing creates tension and results in poor performance and management fatigue.

In a controlled labouratory experiment, Everaert and Bruggeman (2002) measured the impact of three conflicting target costing objectives on the NPD process. Design quality, Cost, and development time were tested. They concluded that providing a cost target to design engineers during NPD has no detrimental impact on design quality (this conclusion only applies to this study because design quality was communicated as the most important factor in the experiment and therefore was not overlooked as it could be in the real world), and that providing a cost target leads to lower-cost new products provided that design engineers face low time pressure, and that providing a cost target does not lead to lower-cost new products when design engineers face high time pressure while increasing development time.

Their recommendation was that Target costing, as a way to survive in a competitive environment, should be used with caution. Their results showed that target costing will have a positive impact on new product development when design engineers work under relaxed conditions. These results have to be considered cautiously as their generalization carry a lot of the weaknesses embedded in labouratory based experiments.

2.7 *Advantages of Target Costing.*

(Castellano and Young, 2003b) pointed out that in order to compete efficiently in the current environment, an organization must become more flexible and responsive in meeting customer needs, and since price is determined by market conditions, a new system of profit planning and cost management is needed. Target costing with its customer, design, and process focus is ideally suited to help meet this need.

Also, (Ewert and Ernst, 1999) said that target costing is often (implicitly) seen as a capital budgeting tool for investment decisions.

According to Cooper and Chew (1996), target costing prevents senior management from launching low margin products that do not generate the appropriate rate of return. It also has the ability to bring the challenge of the market place back through the chain of production to product designers. Furthermore, it is a discipline that harmonises the developers of a certain product (designers, engineers, market researchers, and suppliers).

According to the American Institute of Certified Public Accountants (AICPA) (2000), target costing forces an increased understanding of markets, competition and customer needs in terms of products, quality, timeliness and price. Also, this system is intended to get managers thinking forward and comprehensively that the cost and other implications of target costing is a significant business philosophy as it is a process to plan, manage, and reduce costs. Target Costing stresses the understanding of markets and competition, and focuses on customer requirements in terms of quality, functions, delivery, and –of course- price. It recognizes the necessity to balance the trade offs across the organization and builds teams early in the development cycle to address these trade offs. The

underlying objective of Target costing is to make money, and to re-invest, grow, and increase the organization's value.

2.8 Concerns about target costing

Research and development expenditures in most manufacturing organizations consume a large portion of the companies' resources. In order to be profitable, companies have to ensure that the new products cover their R&D expenses and provide the required return. Ewert, and Ernst (1999) contemplated that the target costing subtraction method [price – margin = allowed (target) cost] can only be justified on the grounds that today's cost-reducing design efforts, themselves are not costless. This implies a trade off between expenditures on costly efforts today in order to reap future benefits from lower unit costs in the manufacturing stage.

Another concern posed was about how can manufacturing engineers be motivated to exert the cost reducing efforts necessary to bring standard costs in line with allowable costs? It must be assumed that the design engineers will not supply cost-reducing efforts for free, and therefore, there exists a potentially important link between the firm's internal incentive system, and the market-determined allowable costs.

Additionally Cost-reducing efforts during the design stage are by no means the only factor affecting long-term product cost. Learning has an effect during the actual manufacturing stage. It lowers production costs as output level increases.

Bayou and Reinstein (1998) mentioned that an atmosphere of scepticism usually accompanies the cost cutting programs. As the decision to cut costs moves down the management hierarchy, some managers may doubt the real intentions behind them, especially when these decisions are made in an effort to deal with a deteriorating

competitive situation. To overcome this scepticism and gain concurrence, higher management may provide incentives or choose to levy a penalty or punishment scheme. However, if the problems facing the firm are severe, these cost cutting schemes only tend to postpone the confrontation with the real issues.

In addition to that, beyond a certain point, comprehensiveness begins correlating positively with complexity, and negatively with measurement precision. The long-term continuity of the cost reduction techniques suffers from the usual difficulties of predictability beyond one year, and waiting for more reliable predictions can cause problems like slow responsiveness to market demands.

Connecting target costing and kaizen costing to normal profits is logical as long as the company operates profitably near normal levels, however, when operating below normal profits, especially under a consistent loss situation, basing target costing and Kaizen costing on normal profit as a target can lead to unrealistic goals.

Finally, in a comprehensive, integrated, and dynamic system concerned with long-term cost reduction targets, secrecy becomes an essential constraint. Competition will dictate that the highest degree of secrecy be secured. Information about the competitor's targeted cost for the next 3 or 4 years would be extremely valuable. Also, secrecy can hinder the controller's ability to participate in the development of the target costing system design.

Cooper and Slagmulder (1997) argue that if the target cost is set consistently too low (too difficult to attain), the work force will be subjected to excessive cost reduction objectives, risking burnout. The discipline of target costing might then be threatened, as target costs will frequently be exceeded. From the opposite point of view, if the target cost is set at a

level that is too easy to attain, the firm will risk the loss of its competitive advantage because new products will have an excessively high cost.

Yoshikawa et al. (1993) argue that some general management factors must be taken into consideration when setting target costs for new products. These are the *scope*, the *cost elements included*, and the *calculation basis* for the target cost.

In terms of target cost *scope*, different parts of the future product life cycle can be taken into account. As mentioned before the target cost can be set for the costs the producer incurs, i.e. R&D, manufacturing, distribution and service costs. On the other hand, the target cost can also be set for these costs the consumer will incur including installation, operating, maintenance and disposal costs. Most of the research conducted in Japan shows that firms concentrate on the revenue-producing life and more specifically on its manufacturing part.

In Cooper (1994a), he found that most of the companies that he studied identified target costs for the manufacturing activities only. Costs for New product design, logistics or services were not included. Also, Fisher (1995) found in his case studies that the focus was on *target production costs*. According to Tanaka (1989), who surveyed 209 Japanese companies using target costing, 100% of the companies set a target cost for the manufacturing activity. Around 41% of the companies set a target cost for the design activity, 37% for the distribution activity and 13% for the user activity of the new product. Similarly, the results of the survey conducted by Tani et al. (1994) of 180 Japanese firms showed that 59% of the respondents include target costs for the development stage, 61% for the trial production stage and 69% include logistic activities.

Second, few studies talk about the *cost elements* (i.e. direct and overhead costs) that take part of the target cost. According to Sakurai (1995), target costing is an effective tool for reducing *direct costs* such as materials and parts, as well as for reducing *indirect costs* such as overhead costs. Cooper & Slagmulder (1997), found a general concentration on direct costs, in addition to some companies using some, so-called, rules of thumb to manage the indirect costs, such as reduction of the number of different materials used in a product, reduction of the number of parts across the product line. The survey of Tani et al. (1994) on the adoption of target costing in Japan shows that 99% of the respondents include direct material and labour costs in the target cost. 81% and 83% of the responding companies applying target costing included manufacturing overhead costs and depreciation of new equipment in their target cost calculation respectively.

3 Conclusion

Target Costing is a fairly new management accounting technique. It is concerned with and driven by the notion of increasing the organization's competitiveness. Ultimately, the technique uses all the organization's resources, brings together all departments in addition to suppliers and distributors in a collective effort to satisfy customers with quality affordable products.

The starting point in the target costing process is market analysis and determination of the suitable price. This price, in turn, is broken into two parts, required profit and allowable cost (price -required profit). The allowable cost is taken back into the research & development / design department and divided over the product's components in a trial to assign each component with its allowable share of the cost. Deliberations between the

production, procurement, purchasing, sales, distribution departments, and suppliers are conducted in order to lock down the assigned costs and start the production process.

Although target costing proved to be a very successful technique in Japan and the United States, it is far from flawless. Further research is needed to avoid the technique's shortcomings.

In the next chapter, the researcher will introduce the theoretical framework underpinning this research. Reasons why the respective framework/s was/were chosen and the prospective benefit expected are also discussed.

Chapter 5

Institutional Economics as a Theoretical Framework

OIE & NIS

A Hybrid Framework

1. Introduction

This chapter aims to introduce Old Institutional Economics (OIE) and New Institutional Sociology (NIS) -among other institutional theories that could be have been used in researching the problem at hand- and give reason for the usage of both frameworks to underpin this research, clarify their ideologies, and discuss institutional carriers. In doing so, the researcher will also critically evaluate both approaches to rationalize their combination.

Ultimately, the main input this chapter looks to produce resembles the goals of Ribeiro and Scapens (2006) which aimed at providing, analysing and explaining the processes leading to the adoption of (or resistance to) innovative systems and practices in specific organizational settings, and/or changes in the role of management accounting in a specific environment.

2. Overview

The environment in which management accounting is practised has certainly changed. With advances in information technology, more competitive markets, different organizational structures, and new management practices. Although some might claim that the fundamental nature of management accounting systems and practices has not changed, there is evidence that the use of accounting within the management process has changed (Abdul-Khalid, 2000, Scapens, 1990, Burns and Yazdifar, 2001, Evans et al., 1996, Scapens et al., 2003)

According to (Martinez and Dacin, 1999), the eighties and nineties saw researchers paying great attention to the study of organizational action from several angles. These angles can be summarized in The Contingency Theory (Child, 1972; Miller & Friesen,

1984; Mintzberg, 1979, 1981), The population Ecology (Hannan & Freeman, 1977, 1984), Resource Dependence (Pfeffer & Salancik, 1978), Transaction Cost Economics (Williamson, 1975, 1981, 1985), The New Institutional Sociology (DiMaggio & Powell 1983; Meyer & Rowan, 1977; Scott, 1995; Zucker, 1987), and finally, Old Institutional Economics (Veblen, 1898, 1909, 1919; Hodgson, 1993)

From a somewhat different point of view, (Yazdifar and Tsamenyi, 2005) mentioned that the 1990's witnessed a wave of books and articles aimed at developing the "so-called" 'Advanced Management Accounting Techniques' like Activity Based Costing, Target Costing, Kaizen Costing, Balanced Scorecard, and Throughput Costing. They declared that, "*Despite the commercial promotion given to such new management accounting techniques, and the enthusiasm cf their key advocates, several studies have found low adoption rates among organizations*". (Hilton et al., 2000) (p. 677) stated, "*In 1998, a survey cf medium sized US manufacturers revealed that standard costing systems remain in widespread use. Although companies are increasingly implementing such cost management practices as ABC, ABM, and Target Costing, these contemporary approaches are being used along side cf standard costing systems*".

(Bromwich and Bhimani, 1989, Burns et al., 1999) argued that some organizations still prefer to use simple/traditional management accounting systems and use the output of these systems in a myriad of applications to the adoption of "newer" management accounting techniques. (Burns et al., 1999, Staubus, 1990) mentioned that a possible reason for this non-adoption is that the level of uncertainty and complexity in the current environment is relatively high. In order to deal with this level of uncertainty/complexity,

organizations supplement their - rather simple - management accounting approaches with other sources of information especially non-financial information.

(Burns and Yazdifar, 2001, Evans et al., 1996, Scapens et al., 2003) also suggested that another reason could be that there is a shift in the concentration of management accounting from the traditional "control-type" to "business analysis and organizational consultancy" – which the new techniques promote.

Currently, managers appear to be using their accounting systems and routine financial reports more flexibly, and in conjunction with a range of other performance measures, both financial and non-financial (Miller & O'Leary 1993).

Little research attention has been given to understanding the process through which these new management accounting systems and practices have emerged (or failed to emerge) through time.

There is a significant difference between Management Accounting change as an outcome and as a process. It seems that the majority of the static theoretical approach type of research focus mainly on management accounting as an outcome, rather than investigating why and how an organization's management accounting becomes what it is -or is not- over time, basically, *the process*.

3. Institutional Economics

According to Ribeiro & Scapens (2006), Moll et al., (2006), in recent years, institutional theories have been widely used in extending the study of management accounting, and management accounting change, to include the social and institutional dimensions of organizations and their environments. More specifically, from an institutional perspective, management accounting systems are seen as inextricably linked to the

prevailing rules and norms that structure social and organizational life (Covaleski and Dirsmith, 1986, 1988; Burns and Scapens, 2000).

Most people recognize the terms "Institutional Economics", "American Institutional Economics" or "Old Institutional Economics" as applying to the tradition of economics associated with Veblen, Commons, Mitchell, and Ayres (Rutherford, 2001).

Walton Hamilton (1919) first brought the term "Institutional Economics" to the general attention of the economics profession in an American Economic Association conference paper.

The core ideas of institutionalism concern institutions, habits, rules, and their evolution, however, institutionalists do not attempt to build a single general model based on those ideas. Instead, these ideas facilitate a strong motivation toward specific and historically located approaches to analysis (Hodgson, 1998). Hodgson also goes on to say that the institutionalist approach moves from general ideas concerning human agency, institutions, and the evolutionary nature of economic processes, towards specific ideas and theories related to specific economic institutions or types of economy.

Moreover, generally, institutional economists approach the analysis of macroeconomic systems by examining patterns and regularities of human behaviour, expecting to find a great deal of imitation, inertia, lock-in, and cumulative causation. (Chiaromonte and Dosi, 1993) stated that regularities or stability at the systemic level might arise because of variations at the micro level. In complex systems, macro stability may depend on micro disorder. The general idea is that it is necessary to build microeconomics on "sound micro-foundations" (it is a different task to derive macro regularities from micro stabilities), but institutional economics perceives regularities at the systemic level as

being reinforced through positive feedbacks that act -partially- upon the microeconomic elements, and therefore the later are not taken as given.

(Hodgson, 1998) made several useful comments about institutions, institutionalization, and micro/macro economics. First, he stated that the institutionalizing function of institutions means that macroeconomic order/relative stability is reinforced alongside variety and diversity at the microeconomic level. He went on to say that individual habits both reinforce, and are reinforced by, institutions. Through this circle of mutual engagement, institutions can be said to have a stable quality. Further, institutions play an essential role in providing a cognitive framework for interpreting sense data, and in providing intellectual habits or routines for transforming information into useful knowledge. Lastly, he said that the fact that institutions typically portray a degree of invariance over long periods, and that they may outlast individuals, provides a reason for choosing institutions rather than individuals as a basic unit of analysis.

(Giddens, 1984) referred to the social structures that are both imposed on and upheld by the actors (e.g. individuals, organizations, etc...) as "*the duality in social structure*". One cognitively oriented view is that a given institution is encoded into an actor through a socialization process. When internalized, it transforms to a script (patterned behaviour). When (or if) the actor behaves according to the script, the institution is enacted. In this manner, institutions are continuously (re-)produced. The enactment of an institution externalizes or objectifies it - other actors can see that the institution is in play, and a new round of socialization starts.

(Scapens, 1994) stated that from an institutional perspective, accounting practices are not merely viewed as technical management tools to provide factual representations of

economic realities for rational and optimal decision-making. He asserted that because reality cannot be understood solely from observation and/or data gathering, then accounting could partially provide an interpretation of economic realities.

(Miller, 1994) (Chapter 2) said, "*Accounting has come to be regarded as a social and institutional practice. One that is intrinsic to, and constitutive of, social relations, rather than derivative or secondary ...*

Accounting can now be seen as a set of practices that affects the type of world we live in, the type of social reality we inhabit, the way in which we understand the choices open to business undertakings and individuals, the way in which we manage and organize activities and processes of diverse types, and the way in which we administer the lives of others and ourselves"

Institutional theory is not really a coherent system of rules. It is rather a collection of ideas that together form a -somewhat consistent- perspective of the mechanisms supporting and restricting social behaviour (Bjorck, 2004).

(Scott, 2001) argues that the institutional theory can also be viewed as an extension of the open systems theory and the revolution it created in the study of organizations.

(Scott, 1995b) (p. 46) asserted, "*Institutions are social structures that have attained a high degree of resilience and flexibility. [They] are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life. Institutions transmit through various types of carriers, including symbolic systems, relational systems, routines, and artefacts. Institutions operate at different levels of jurisdiction, from the world system to localized interpersonal relationships. Institutions by definition connote stability but are*

subject to change processes, both incremental and discontinuous". In summary "*institutions are structures based on more or less taken for granted, formal or informal rules that restrict and control (or support) social behaviour"* (Johansson, 2002) (translated version).

Institutional theorists propose that an organization's survival requires it as much to conform to societal norms of acceptable practice as to achieve high levels of production efficiency and effectiveness. Thus, many aspects of an organization's formal structure, policies and procedures serve to demonstrate conformity with the institutionalized rules and expectations expressed by external constituents (Meyer and Rowan, 1977, DiMaggio and Powell, 1983).

Sometimes, organizations tend to display conformity with overall institutions dominating their environment, but in reality, this display does not represent how these organizations actually carry out their assigned tasks. (Meyer and Rowan, 1977, Meyer, 1983) reasoned that organizations tend to avoid massive dysfunction by *decoupling* their external image systems from their internal operating processes. More specifically, they observed that "to maintain conformity, organizations that reflect institutional rules tend to buffer their formal structures from the uncertainties of technical activities by becoming loosely coupled, building gaps between their formal structures and actual work activities".

3.1 Institutional Carriers

Empirically, institutions do not exist. We have to look for instances where they materialize in order to illustrate what they are. Institutions are transmitted by being embedded in carriers (Jeppeson, 1991). (Scott, 2001) identified four types of institutional carriers:

Symbolic systems: Rules, Laws, Values, Expectations, Categories, Typification, Schema

Relational systems: Governance systems, Regimes, Authority systems, Structural isomorphism, Identities. ***Routines:*** Protocols, Standard operating procedures, Jobs, Roles, Obedience to duty, Scripts. ***Artefacts:*** Objects complying with mandated specifications, Objects meeting conventions, Standards, Objects possessing symbolic value. These four types list institutional carriers with characteristics ranging from regulative, via normative, to cognitive-cultural aspects.

3.2 Levels of Analysis

Institutions and their effects can be studied at different levels of analysis. An institution found at one level of analysis often affects behaviour on the level below (table 5.1). As an example, a particular organization (level) might be a subject to institutional forces at the organizational field (level). An organizational subsystem (i.e. department in an organization) might enact institutions emanating from the societal level. So, not only individuals, but also organizations and groups of organizations can be subjected to institutional forces.

Level	**Example**
World System	
Societal	The country
Organizational field	The finance sector
Organizational population	Corporate banks
Organization	Specific bank
Organizational subsystem	Corporate finance department

Table 5.1: Levels of Institutional Analysis. Adopted from Scott (2001)

4. Institutional theories

Institutional theories have been widely utilized in social sciences lately. To date, three such theories have been used in the accounting literature. They are:

Old Institutional Economics (Scapens, 1994)

New Institutional Sociology (Carruthers, 1995)

New Institutional Economics (Transaction Economics) (Walker 1998)

All three theories offer insights, which are helpful for conceptualizing management change, however, Old Institutional Economics (OIE) was chosen as a framework for this research.

4.1 An Institutional Framework

The starting point for our institutional framework is the recognition that management accounting practices can both shape and be shaped by the institutions that govern organizational activities.

(Hamilton, 1932) used the term "***Institutions***" *to portray "A way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people*". As such, institutions can be regarded as imposing form and social coherence upon human activity, through the production and reproduction of settled habits of thought and action.

Institutions themselves evolve through a process of routinization of human activity. Therefore, there is a duality between action (human activity) and the institutions structuring that activity.

A **Habit** is "*More or less self-actualizing dispositions or tendencies to engage in previously adopted or acquired forms of action*" (Hodgson 1993b).

A **Routine** is "*The patterns of thought and action which are habitually adopted by groups of individuals*". Organizational routines play an important role in the relationship between actions and institutions.

Rules are "*The formally recognized way in which 'things should be done*"

Scapens argues that rules are necessary to co-ordinate and give coherence to the actions of groups of individuals.

Routines are "*The way in which 'things are actually done*"

In the process of routinization, previously formulated, rules may become modified as the group locates mutually acceptable ways of implementing them. In various types of organizational activity, routines -that either have deviated from the original rules, or were never explicitly set out in the form of rules- may emerge. In such cases, it may be decided to formalize the established routines in a set of rules, e.g. in a manual of procedures. This may be done to avoid the knowledge being lost when key staff leave, to facilitate the training of new staff, or to exercise control over further modifications.

∴ Rules are the formalized statement of procedures, whereas routines are the procedures actually in use.

Rules are normally changed only at discrete intervals, but routines have the potential to be in a cumulative process of change as they continue to be reproduced.

In the management accounting context, *rules* comprise the formal management accounting systems/techniques, as they are set out in the procedure manuals, whereas *routines* are the accounting practices actually in use.

4.2 Actions and institutions

The relationship between actions and institutions is essentially the agency-structure relationship discussed in the social sciences.

Giddens' (1984) Structuration theory is concerned with the relationship between the actions of knowledgeable human actors and the structuring of social systems.

Giddens distinguished between **Systems**, which comprise discernibly similar social practices, which are reproduced across time and space through human actions, and **structures**, which bind those social practices into systems.

An **Institution** is *"The shared taken-for-granted assumptions which identify categories of human actors and their appropriate activities and relationships"*

[Barley & Tolbert 1997] (p. 100)

Institutions are the structural properties, which define the relations between, and the activities of, the members of particular social groups or communities, and, in the same way, institutions are the outcome of the behaviours of the social group or community.

An important feature of institutions is their seemingly normative and objective character. They define the behavioural patterns that are expected in the particular social group.

Institutions that are relatively short-lived and/or that have not gained widespread acceptance are more vulnerable to challenge and less likely to influence action (Barley and Tolbert, 1997).

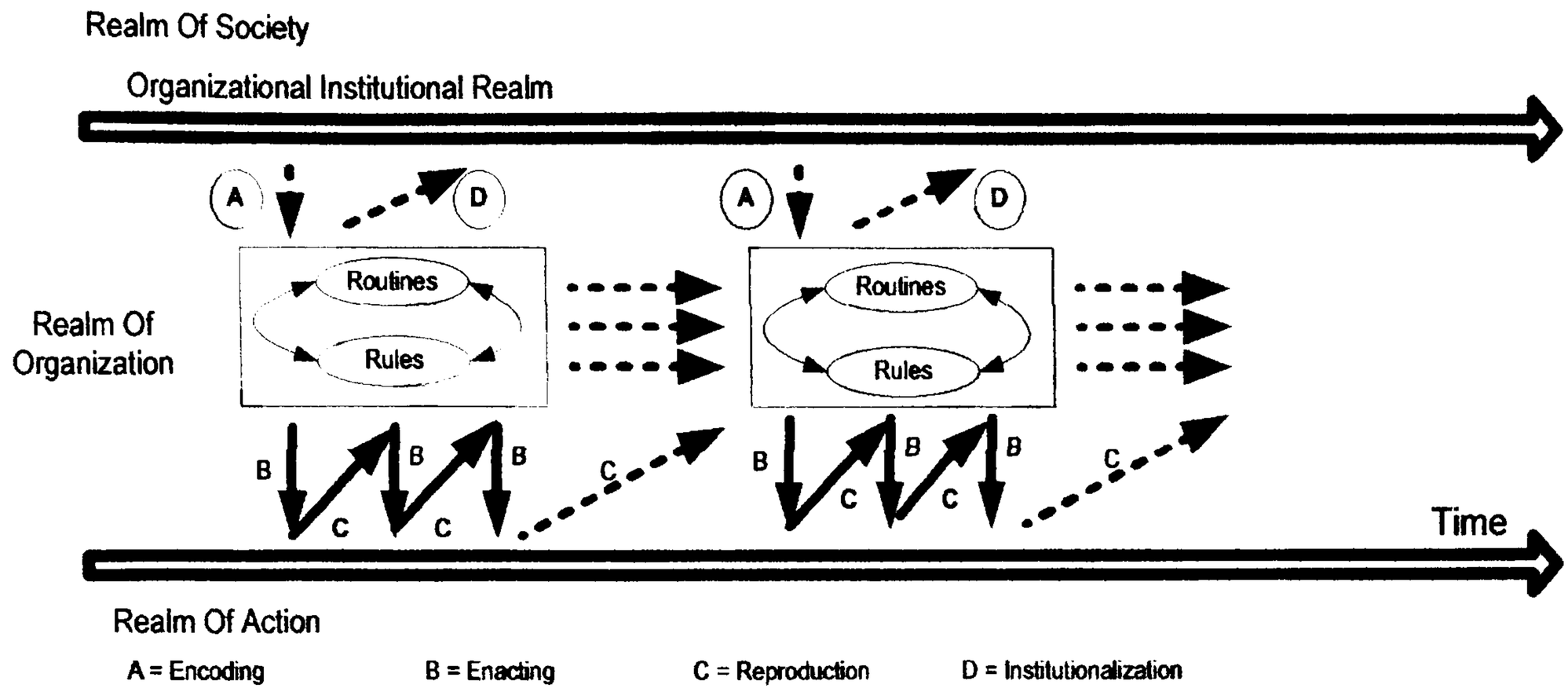

Figure 5: The Process of Institutionalization; Adapted from (Burns and Scapens, 2000)

Barley & Tolbert (1997) (p. 97) defined scripts as "*Observable, recurrent activities and patterns of interaction characteristics of a particular setting*"

It should be emphasized that the purpose of that framework is to describe and explain analytical concepts that can be used for interpretive case studies of management change.

Burns & Scapens (2000) apply such theoretical concepts as "Institutions", "Habits", and "Routines" to indicate how accounting practices can become routinised, and in time begin to constitute part of the taken for granted assumptions and beliefs in an organization.

This is why Old Institutional Economics insight is useful for conceptualising the continuity of accounting over time, though continuity can change.

"Accounting practices and emerging routines can be said to be institutionalised when they become widely accepted in the organization such that they become the unquestionable form of management control" John Burns, 1999 (p. 28)

4.2.1 Elements considered for an institutional framework

According to (Scapens, 1994), there are some main elements that have to be considered if an Institutional framework was to be devised for the study of Management Accounting practices.

First, we have to reject the atomistic approach of mainstream economics that grounds economic analysis in the behaviour of individual rational economic actors.

Second, we also have to reject the methodological proposition that economic theory should be judged by the *correctness* of its predictions, rather than the *validity* of its assumptions.

Institutional economics considers the holistic analysis rather the atomistic individualism as a fundamental principle. (Gruchy, 1947; Myrdal, 1978; O'Hara, 1993).

Institutional Economists look at any economic system not as the sum of its parts, but rather as a whole system, and use holism and pattern modelling to generate economic theories. They (Institutionalists) view economic activities as a social phenomenon, and are interested in their relationship with social institutions. They also view the economic system as a sub-system of the larger societal or cultural system, and human beings are considered cultural products, affected by, and functioning within, an emerging cultural process.

In addition to that, knowledge is looked at as a subjective rather than an objective observable fact. Hayek (1952) argued that facts are bounded by concepts, and theories, and therefore, agents create the reality in which they act. Based on that, institutional economists argue that it is institutions which shape the cognitive processes of individual actors.

Simon (1957), links bounded rationality with *satisficing*, rather than *optimizing* behaviour, which is a parallel view to old institutional economists who argue that satisficing can be seen in rule-based behaviour. (This does not deny that agents/actors have reasons –not always rational- for acting the way they do). Boland (1982) distinguishes between decisions that are *reasonable* and those that are *rational*. The former only implies a willingness to provide reasons for one's actions, while the latter implies a necessary logical mean-end relationship.

Similarly, Giddens (1984), argues that even though individual actors may not consistently pursue rational choices, and that their actions may be guided by their intentions, but they can also have unanticipated consequences. The rules that have to be followed – in themselves - might be an outcome of earlier actions. In other words, whilst rules and routines may give structure and coherence to individual actions, those rules themselves (most probably) could have emerged through actions. The formation of rules might be the result of evolution, rather than rational choice. Institutions do more than "inform" current actions, they create the concepts and cognitive frames through which certain behaviours become taken-for-granted. (N.B: this should not imply that there is a one-way causality between institutions and actions). In other words, one is neither the determinant nor the creator of the other.

Simon (1957) and Vanberg (1988), argue that in a complex and uncertain world, it is impossible for an individual to undertake the choices that are assumed in rational economic models.

In her article titled "Management Accounting change", Anita Allott said:

"2000 and beyond will see 'hybrid accountants' combining their financial knowledge with increased commercial awareness" (p. 55)

4.3 Old Institutional Economics (OIE)

(Burns, 2001, Yazdifar, 2003) said that old institutional economics emerged as an opposing movement to the 'static' 'rational' economic theories that prevailed during the beginnings of the twentieth century. It rejects the assumption that individuals will behave rationally all the time.

OIE -generally- intends to answer the following question: Why and how economic phenomena become what they are (or are not) through time? (Burns, 2000 (b)). Burns went on to say that OIE strives to Clarify economic phenomena in terms of their processes or, in other words, in the making.

(Abdul-Khalid, 2000, Hodgson, 1998) asserted that individual and organizational actions are greatly influenced (almost determined) by the socially learned and acceptable pattern of behaviour. This should not convey that individuals are a passive player in the process, but rather, that both societal customs and individual actions are mutually re-enforcing. Customs and routines will evolve from this close relationship, and consequently institutions will be established. (Neale, 1987, Neal, 1987)) described institutions as being used to *"convey the idea that peoples' actions are shaped by and reflect culturally inherited but socially evolving social rules and/or relationships"*

According to Burns & Scapens (2000), Scapens (2006), Ribeiro & Scapens (2006), institutions (well-established ways of thinking and performance in a social system) are central to the OIE approach to the analysis of processes of change. It is a concern of OIE researchers, not only to analyze the role of prevailing institutions in change processes, but

also to study the reproduction or change in institutions over time. Habits and routines are important components of institutions. Both refer to ways of thinking and doing that become ordinary/ customary/ common over time. The difference between habits and routines is that habits are features of the individual, routines -more generally- include the regular ways of thinking and doing at the level of both the individual and the group. The frequent reproduction of habits and routines over time can lead to institutionalization, which is a gradual and in some sense "natural" process through which specific patterns of thought and action become widespread and taken-for-granted as the way things are

From a different point of view, (DiMaggio, 1988, Oliver, 1991, Strang and Sine, 2002) acknowledged that cultural constraints do not completely determine human action. Institutions merely set limits on rationality by harnessing the opportunities and alternatives people perceive, and -as a result- increase the probability that particular behaviour will take place.

4.3.1 OIE criticism

The main drawback of the Old Institutional Economics theory is that it pays unsatisfactory attention to environmental pressure (the macro level). (Burns, 2000 (a), Burns, 2000 (b), Burns, 2001) said that OIE would be more suitable -as a theoretical framework- for studies of the processes of change and resistance to change **within** organizations.

Further more, Ribeiro & Scapens (2006) identified two more ideas that constrain the generalizability of the Old Institutional Economics train of thought. In their own words, they said, "*We identified two further aspects in OIE where development seemed necessary. First, it is not clear in most OIE studies when and how fundamental*

institutional change takes place. Second, our observations in the case organization led us to take issue with the notion that rules and routines are underpinned by institutions in the form of unquestioned assumptions, which are located at a (sub-) cognitive level – i.e. below the surface of everyday discourse and dissociated from their historical origins. Indeed, in the organization we studied, deeply sedimented rules were held in place, not by taken-for-granted assumptions, but by very solid relations of power." (p. 106)

Rutherford (1994) noted, "*OIE does not represent a single well-defined or unified body of thought, methodology, or program of research*". Therefore, it is not easy to pinpoint a core or mainstream theoretical framework in OIE, as we is the case of NIS Ribeiro & Scapens (2006)

4.3.2 Why Institutional theories

"The word theory is derived from theorin (GK), to look at, and has the derivative theoria (GK), a seeing or a speculation. Thus theorising can be thought of as a particular way of working with images and a theory as a particular way of seeing" (Scapens, 1994).

Using these definitions, a theoretical framework could be looked at as a way of seeing a certain phenomena or behaviour.

Assuming that there are formal and/or regulated management accounting techniques and methods applied in the business world in Egypt, the doubt still remains as whether the professionals that apply them have a strong awareness about their meaning, usefulness, and up to date-ness, or were these "techniques" just the conventional way that they –the professionals- found in place when they first took their jobs

"The Institutional framework brings into focus the routine and institutionalized character of accounting practices. It encourages us to take seriously the study of accounting as a practice, rather than comparing accounting practice with some ideals" (Scapens, 1994).

(Scott, 1995b) asserted, "*Institutionalists remind us that no organization can be properly understood apart from its wider social and cultural context. These environments create the infrastructures –regulative, normative, and cognitive- that constrain and support the operation of individual organizations. The formal structures of organizations are seen, at least in part, to represent theories of action that embody the prevailing cultural logics. Rationalities are contextualized*".

According to Moll et al. (2006); Covaleski and Dirsmith (1986, 1988); Burns and Scapens (2000), recently, institutional theories have been prominent in extending the study of management accounting, and management accounting change, to include the social and institutional dimensions of organizations and their environments. More specifically, from an institutional perspective, management accounting systems are seen as closely coupled to the prevailing rules and norms that social and organizational lives are shaped by.

Moreover, Ribeiro & Scapens (2006) (p. 99) ascertained that "*The simplistic and static character of both conventional "textbook" perspectives on management accounting (Cooper and Kaplan, 1999; Drury, 2003; Horngren et al., 2000), and descriptive approaches based on organizational theory (see Chenhall, 2003, for a review of "contingency studies"), have led management accounting researchers who are concerned with intra-organizational change to seek alternative methodological and theoretical approaches. In-depth case studies of management accounting change have*

been used to collect holistic data on the processes of change; and theories exploring the rich social context in which such change unfolds have been adopted (Burns and Scapens, 2000; Burns and Baldvinsdottir, 2005; Perren and Grant, 2000; Ribeiro and Scapens, 2004)"

Old Institutional Economics is particularly useful in the present context as it provides a focus on organizational routines and their institutionalization and, as stated above, in studying management accounting change.

In addition, this focus on institution provides us with a basis for exploring the interaction between management accounting and other social institutions.

Moreover, Old Institutional Economics concentrate on "Institutions" as the unit of analysis, rather than the rational maximising behaviour of individual decision makers. The discipline also focuses on economic change instead of economic equilibrium, which -certainly- makes it very useful for comprehending the development and reproduction of accounting practices.

If we looked at accounting practices as institutionalized routines, this will better enable researchers to understand activities according to certain sets of accounting rules and procedures that enable decisions to be made and activities to be undertaken.

We are primarily concerned with management accounting change within individual organizations, i.e. the intra-organizational processes of change. For this purpose, management accounting is conceived as a routine -and potentially institutionalized- organizational practice. By institutionalized we mean that management accounting can, over time, come to underpin the 'taken for granted' ways of thinking and doing in a particular organization.

4.4 Neoclassical Economics (NIE) vs. Old Institutional Economics (OIE)

(Hodgson, 1998) defines neoclassical economics as an approach that: (1) assumes rational, maximising behaviour by agents with given and stable preference functions, (2) Focuses on attained, or movements toward, equilibrium states, and (3) excludes chronic information problems.

He goes on to say that, in contrast to the institutionalist approach, neoclassical economics moves from a universal theoretical framework concerning rational choice and behaviour, directly to theories of price, economic welfare, etc.... On the other hand, institutional economics does not presume that its habit-based conception of human agency itself provides enough to move toward operational theory or analysis. Additional elements are required. In particular, an institutionalist would stress the need to show how specific groups of common habits are embedded in, and reinforced by, specific social institutions, and therefore, institutionalism moves from the abstract to the concrete. Instead of standard theoretical models of given, rational individuals, institutionalism builds upon psychological, anthropological, sociological, and other research into how people behave. Indeed, if institutionalism had a general theory, it would be a theory illustrating how to develop specific and varied analyses of specific phenomena.

Conventional wisdom portrays management accounting as providing information for management planning and control and, as argued by many, such a portrayal is grounded in the Neo-Classical theory of the firm (Yazdifar 1999). The neo-classical economic theory faces difficulties in analysing the process of change as it is based on the core economic assumptions of rationality and equilibrium.

The Neo-Classical economic theory is also more concerned with predicting the rational or 'optimal' outcomes, rather than explaining the unfolding processes in moving from one equilibrium state to another.

(Nelson and Winter, 1982, Burns, 1997, Scapens, 1994) stated that because the neoclassical economic theory relies upon key assumptions of equilibrium and rationality, such theory fails to deal with the dynamics of change over time.

(Burns and Scapens, 2000, Burns, 1999) as referenced in Yazdifar (1999) stated that conventional accounting theory –grounded in neoclassical economic theory- has difficulty in dealing with the complexity of micro-level processes of accounting change and the processes of moving from one equilibrium to another.

Orthodox economists would -most probably- disregard or reject any work about social dimensions out of the concept of economic rationality, and dismiss such work to Sociology departments.

Hodgson & Screpanti (1991) reject such methodological approach, and take into consideration this social dimension in their definition of Economics: "*The study of the processes and social relations governing production, distribution, and exchange of wealth and income*". Boland (1979) argues that whereas in the approaches grounded in neoclassical economics, institutions are unspoken-of and treated as static constraints, which ultimately define the economic equilibrium, they –institutions- can also be explicitly analysed as dynamic and active instruments that can facilitate or prevent change.

4.5 Economic Sociology & Institutional Economics

Due to a number of developments in both Economics and Sociology, the relationship between the two disciplines has become an important issue in contemporary social sciences. (CF. Baron & Hannan (1994); Ingham (1996).

Economists have studied a growing number of subjects that traditionally belonged to the discipline of Sociology in the last few decades under the heading of "Economic Imperialism" Hirschleifer (1985).

Talcott Parsons argues that Sociology -The analysis of the institutions of economic life- should be a complement to -rather than- a substitute for mainstream economics.

He further argues that Sociology should study the ultimate ends, or the value factor of social action, whereas economics should study the means. That makes Parsons a challenger of institutional economics, which studies institutions as the embodiment of values.

Similarities between Economics and Sociology are abundant, to the limit that led Parsons to request a clear division of labour between them to safeguard the theoretical independence of both disciplines (Parsons 1935b).

Robbins' (1932) definition of Economics as "*The Science that studies human behaviour as a relationship between ends and scarce means which have alternative uses*" also led Parsons to his famous "Analytical Factor View" which said, among other things, that "*if economics was to study the allocation of means in the means-ends chain that constitutes human behaviour, then sociology would concentrate on the value factor*" i.e. the ultimate common ends and the attitudes associated with and underlying them, considered in their various modes of expression in human social life

The Robbins/Parsons division of labour implied that the institutions of economic life were the legitimate subject, even the central element, of sociology, not economics. Since Parsons defined institutions as the embodiment of the ultimate values of a society, and that sociology was to study the value factor in human action, it followed "that economic institutions are -in the causal sense- a specifically non-economic factor" Parsons (1934).

Old Institutional Economics (OIE) is not to be confused with New Institutional Sociology (NIS) (DiMaggio and Powell, 1991(a), Scott, 1995b).Although there are substantial similarities between OIE and NIS, the later tends to assume "given" institutions while the former deals more directly with the emergence, continuity, and change of institutions through time. Another difference is that NIS tends to focus more on "macro" institutions while OIE focuses additionally on "micro" institutions within organizations (Scapens, 1994) (Burns, 1997).

4.6 New Institutional Sociology (NIS)

Meyer and Scott (1992) noted that the foundations of NIS were laid in by Meyer and Rowan's (1977) seminal paper, which came after a series of puzzling observations made in the 1970s by a group of researchers studying the educational sector in the USA. Specifically, they had identified inconsistencies, and observed the loose coupling of formal structures/procedures and actual work practices that were inexplicable by the current organizational theories at the time.

NIS is concerned with institutions at the more "macro" level, and is a powerful theory when it comes to clarifying the adoption of innovative systems and/or procedures by "the already institutionalized" organizations (Meyer and Rowan, 1977; DiMaggio and Powell, 1983).

According to (DiMaggio and Powell, 1991(a)), the new institutional sociology theory emphasizes the relationship between an organization and its environment, and stresses the importance of culture in shaping organization reality.

(DiMaggio and Powell, 1991(b)) asserted that if organizations operate within similar environments, they are said to be subjected to comparable demands over what is generally perceived as acceptable or normal behaviour, and therefore, will have similar structures and processes.

According to Ribeiro & Scapens (2006), the key contention of NIS is that some organizations operate within highly institutionalized environments. In this sense, "environment" is not merely conceptualized as a source of task constraints or a relational network (of customers, suppliers and other near constituencies) that poses demands for operational coordination and control on an organization. Rather, it -the environment- incorporates cultural rules and social norms that are reflected in the organizations' specific formal structures and procedures. That is, institutionalized organizations tend to adopt structures and procedures that are valued in their social and cultural environment in order to achieve legitimacy and to secure the resources that are essential for their survival.

(Carpenter and Feroz, 2001) mentioned that any organization conforming to societal rules acquires 'external legitimacy and increases its chance of survival. This conformance is not rationally linked -per se- to whether the new rules would render the organization more efficient.

(Carruthers, 1995) stated, "*People live in a socially constructed world that is filled with taken for granted meanings and rules. Much of their actions are neither intentional nor conscious, for they are undertaken unconsciously as a matter of routine.*" (p. 320)

To define institutions according to the new institutional sociology theory, (Scott, 1995b) (chapter 1) stated, "*Institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning to social behaviour. Institutions are transported by various carriers (i.e. cultures, structures, and routines), and they operate at multiple levels of jurisdiction. In this conceptualization, institutions are multifaceted systems incorporating symbolic systems-cognitive constructions and normative rules- and regulative processes carried out through, and shaping social behaviour. Meaning systems, monitoring processes, and actions are interwoven. Although constructed and maintained by individual actors, institutions assume the guise of an impersonal and objective reality. Institutions ride on various conveyances, and operate at multiple levels -from the world system to subunits of organizations*"

Scott went on to state that "*All organizations are institutionalized organizations. This is true both -in the narrower sense- that all organizations are subject to important regulative processes and operate under the control of both local and more general governance structures, as well as -in the broader sense- that all organizations are socially constituted and are the subject of institutional processes that define what forms they can assume and how they may operate legitimately*"

Institutions, from a NIS point of view, are conventions that assume rule-like status within, and between, organizations (DiMaggio and Powell, 1991(a)).

(Meyer and Rowan, 1977) asserted that according to NIS theory, an organizational formal structure dramatically reflects the myths of their institutional environments instead of the demands of their work activities. Such myths are highly institutionalized, rationalized, and impersonal prescriptions that specify -in a rule resembling manner- ways of pursuing social goals that can then be rationally identified as technical goals.

(Burns, 1997) said that the NIS theory highlights the importance of cultural factors such as symbols, cognitive systems, and normative beliefs, in the functioning of organizations. Therefore, managerial action is considered to be embedded in specific cultural and historical frameworks that shape the organization and its behaviour.

(Granovetter, 1985) argues: "*Much of the utilitarian tradition, including classical and neoclassical economics, assumes rational, self interested behaviour affected minimally by social relations, thus invoking an idealized state not far from that of these through experiments. At the other extreme lies what I call the argument of "Embeddedness": the argument that the behaviour and institutions to be analyzed are so constrained by ongoing social relations that to construe them as independent is a grievous misunderstanding*" (p. 490)

Social influences are powerful driving forces that cannot and should not be ignored. They are mechanisms through which society members (actors) acquire customs, habits, or norms that they automatically follow without giving much thought, and irrelevant to rational choice.

In addition to cultural factors, (Granlund and Lukka, 1998) emphasized that different sources of power within a society exert pressure on processes of management accounting change.

4.6.1 Isomorphism

New Institutional Sociology revolves around the central assumption that organizations are pressured to be 'isomorphic' with, or in conformance with a series of institutionalized beliefs ((Abernethy and Chua, 1996). (DiMaggio and Powell, 1991(a)) defined Isomorphism as "*the concept that best captures the process of homogenization*". There exist two types of Isomorphism. (1) Competitive Isomorphism, which defines how competitive forces drive firms towards adopting the least-cost, efficient structures and practices, and (2) Institutional Isomorphism which portrays the infiltration from environment to firm as a primarily cultural and political process (Burns, 2001).

In the management accounting change part of this research, we discussed the mechanisms through which institutional isomorphic change occurs namely: Coercive isomorphism, Mimetic isomorphism, and Normative isomorphism. Figure (5.2) below illustrates the relation between the mechanisms, the environment, and the organization.

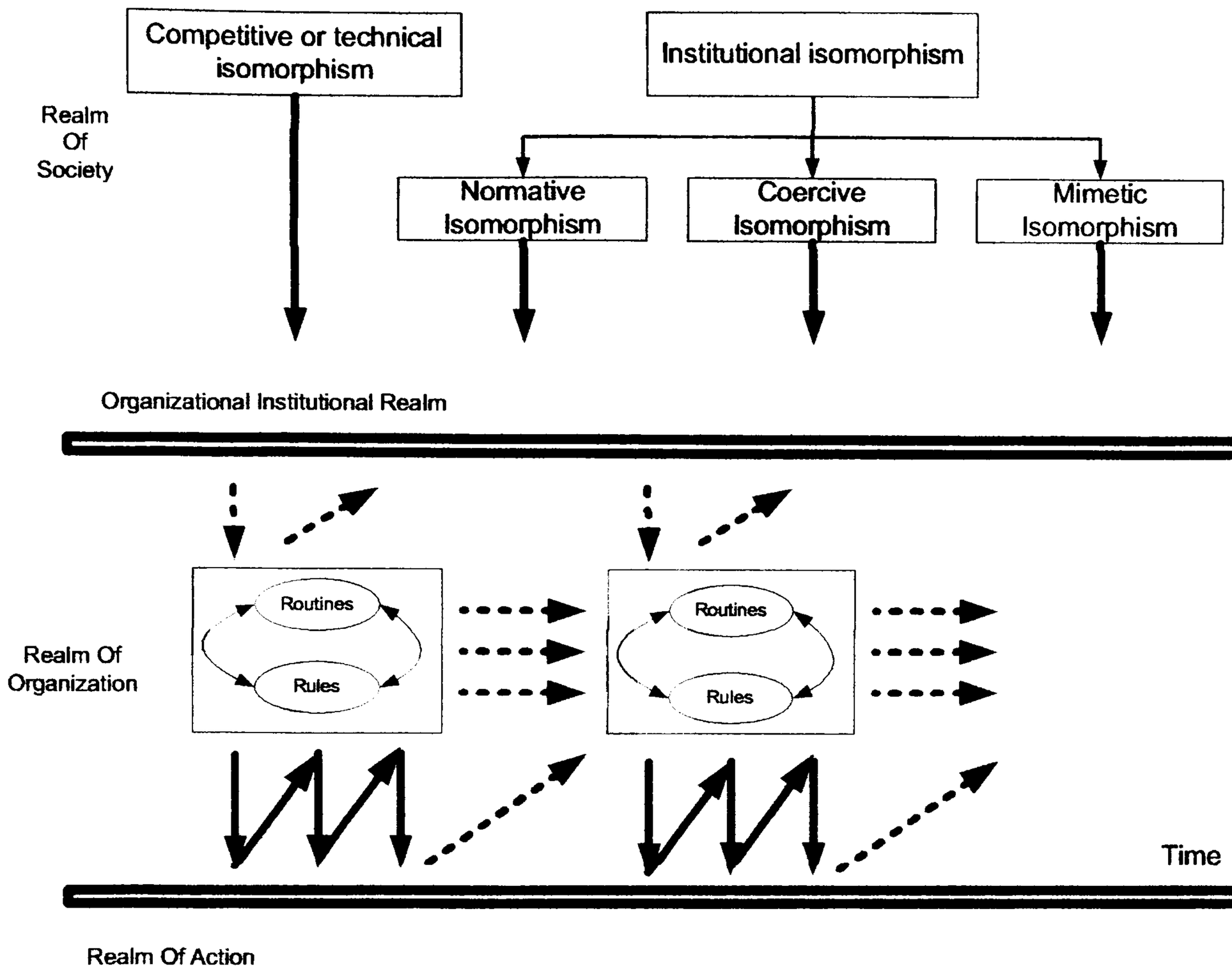

Figure 5.2 The proces of institutionalization. (Adapted from Yazdifar 2003)

Finally, it is worth noting that some researchers have colliding thoughts about New Institutional Economics. Oliver (1991), Edelman (1992) argued that organizations tend to follow a strategic approach in their response to the institutional pressures imposed on them. In other words, organizations may deliberately comply with regulations or adopt specific formal structures and procedures in a manipulative fashion, in an attempt to gain legitimacy and consequently secure resources, grants, etc… on which they depend.

On the other hand, Tolbert and Zucker (1996) contested that idea of "window-dressing"- Specifically, the thought that institutionalized structures are decoupled from actual

practices. Berger and Uckman (1966) defined institutions as: "*a reciprocal typification of habitualized action by types of actors*".

Building on that definition, an institution, once sedimented, constitutes a set of deeply ingrained and taken-for-granted rules and values that have supremacy in a certain social setting, and that underlie organizational behaviours or individual thoughts and actions thus conforming to Old Institutional Economics' studies in management accounting.

4.6.2 NIS criticisms

Ribeiro & Scapens (2006) noted some limitations of the NIS framework. Namely its rather static character, reflected in its conceptualization of the operation of institutional pressures; and in the way it deals with intra-organizational issues.

(Major and Hopper, 2002, Perrow, 1991) mentioned three issues that withheld New Institutional Sociology from being a more solid theory used in interpreting organizational behaviour.

4.6.2.1 Neglect of power issues and actors' interest-based behaviour

(Carruthers, 1995) (p. 317) said that, "*New Institutional Sociology is too concerned with culture and taken-for-granted meanings to be able to discern the conflicts that abound in organizational life and that to focus on myth and ceremony is to overlook power and control*".

(Collier, 2001, Zucker, 1991) among others further criticized NIS. Among their criticisms, is the notion that NIS has a deterministic nature, and that it neglects the role of active agencies and issues of power and interest at intra-organizational (micro) level.

Another criticism is that NIS portrays organizations too passively and depicts environments as overly constraining.

Finally, Zuker mentioned that NIS researchers that have no concrete base on the micro-level, risk dealing with institutionalization as if it were a black box on the organizational level.

4.6.2.2 Incapacity to explain processes of organizational change

NIS can be criticized because it does not -as a theory- research the causes that make organizations challenge and/or reject institutionalized procedures. NIS focuses on the study of persistence instead of trying to understand organizational change.

In addition, NIS does not fully encompass the internal drivers of organizational change, and therefore the theory cannot explain the reason(s) why some organizations adopt fundamental change while others do not in spite of them both being exposed to similar institutional pressures.

Finally, NIS is criticized because it does not provide a method using which organizations' management should deal with competing interests within the organization (Buchko, 1994, Carmona et al., 1998, Collier, 2001, Genschel, 1997, Oliver, 1992).

4.6.2.3 Lack of consideration of internal generation of institutional forms

Some of the critiques that NIS received were concerning its lack of consideration of how organizational institutional structures were generated internally. (Abernethy and Chua, 1996) asserted that NIS does not consider the path that change takes on the organizational realm or the micro level; instead, it concentrates on change at the macro or extra-organizational level.

(Scott, 1991) (chapter 4) said that NIS focuses on "*examining the effects of institutional environments on organizational structures rather than with examining the internal generation of institutionalized forms within organizations*".

(Abernethy and Chua, 1996, DiMaggio, 1988) stated that the NIS theory offers a narrow insight into institutionalization in the making (as opposed to institutionalization as an achieved state) and de-institutionalization processes. In other words, it does not answer the question "**How do new values and beliefs take root and replace earlier norms**?" satisfactorily (Yazdifar, 2003).

5. A hybrid framework "Neo-OIE"

In their research aiming to identify the institutional factors influencing the adoption (non-adoption) of modern management accounting techniques, Ribeiro & Scapens (2006) said, "*A particular aspect cf our conceptual framework, based on OIE, which seemed in need cf further development, was the explanation cf what causes innovations to* ***enter*** *an organization in the first place. Although an OIE-based conceptual framework should be capable cf shedding light on the processes cf management accounting change, following the introduction cf an innovation into an organization, it is rather vague about the reasons and processes that led to the introduction cf such innovations. This prompted our interest in another stream cf institutional theorizing: "new institutional sociology" NIS".*

(p. 107)

Yazdifar (2003), Ribeiro & Scapens (2006) proposed a hybrid theoretical framework in order to overcome the drawbacks of -both- old institutional economics and new institutional sociology. Yazdifar said, "*NIS and OIE theories provide complementary insights. Both share the premise that action is largely organized by institutions, widely held definitions cf the behaviour, and relationships appropriate for a set cf actors*".

They go on to state that in comparison to previous theories studying organizations, New Institutional Sociology provides an enriched conceptualization of the environment and

how this may impinge on organizations. However, it -NIS- conceptualizes organizations as actors that respond in a relatively uniform manner to environmental stimuli or to pressures from the networks within which they operate. Issues of internal conflict and distributions of power, and the indeterminacy and contingency of the events and actions that may lead to those responses, are not considered. It is in this sense that the studies, which draw on OIE to provide explanations of resistance to organizational and management accounting change differ from, and **potentially complement**, NIS studies. The OIE-inspired studies seek to open up the black box of processes of organizational change and resistance to change.

(Burns, 2000 (b)) pointed out that the multi institutional framework illustrates how following the formation of new systems and practices *-forced by factors outside the organization (on the macro level) and embraced by companies through the process of isomorphism-* will in time become taken for granted activities. The re-enactment of these systems and practices will be performed without conscious reference to the initial rules. The new practices and emerging routines are said to be **institutionalized** at firm level (the micro level) when they become widely accepted in a firm to the extent that they are an indisputable form of the organization's system. Only in that case, they (the systems and practices) will have become an inherent feature of the organizational systems and processes, and will represent the **expected/ normal** pattern of behaviour. In addition, they will define the relations between a firm's groups and/or individuals on one level, and extra organizational factors/institutions on another level.

The hybrid institutional framework emphasizes that the causal flow between environment and firms is two way. It exposes the mechanisms or systems through which the society

level rules and myths infiltrate the intra-organizational activities. It tries to explain how the organizations' systems and practices -whose origins lie outside the organization's boundaries- may become embedded within the company and **create reality**(Burns, 2000 (b), Scott, 1987).

To summarize, Ribeiro & Scapens (2006) said "*Specifically, we analyzed and noted the potential complementarities between two institutional theories with rather different origins and levels of analysis, but which – at least in their essence – share similar conceptual ground: NIS and OIE. Whilst on the one hand NIS provides macro-level explanations of the adoption of specific structures and procedures in organizations that operate within institutionalized environments, OIE adopts a more intra-organizational stance that seeks to shed light on processes of resistance, or on the decoupling of the formal arrangements and the actual day-to-day practices in organizations. Recent research seems to point to an increasing integration of NIS and OIE. Such research is characterized by attempts to provide deeper analyses of the events, which unfold as institutional pressures are exerted on organizations. This implies an extension to NIS, incorporating the intra-organizational and processual type of analysis that is more typical of OIE. The converse is also true. OIE can be usefully extended by considering the impact of institutional pressures and the processes through which such pressures can trigger changes that may in time overthrow prevailing institutional arrangements*".

6. Conclusion

According to Miller (1994), "*The term rationales can be used to designate ... accounting as a social and institutional practice. For accounting practices are more than the numerical computations of costs, profits, losses, and returns. Accounting practices*

include particular discursive representations and vocabularies. These are assembled at various collective levels, articulated in diverse locales, and in relation to disparate concerns" (p. 89)

Miller goes on to say that "By transforming the physical flows of organizations into financial flows, accounting creates a particular realm of economic calculation of which judgements can be made, actions taken or justified, policies devised, and disputes generated and adjudicated. This calculative expertise changes over time. In emphasizing the constitutive and changing nature of these calculations, attention is drawn to the reciprocal relations between the technical practices of accounting and the social relations they form and seek to manage. It is historically specific assemblages, the fragile relations formed between a multiplicity of practices, and the tensions that traverse such complexes that enable accounting to achieve such heightened significance at particular moments. The technical practice of accounting is intrinsically and irredeemably social".

Therefore, management accounting should not be viewed -simply- as a technical objective and institutional system, but as a system that has embedded logical attributes and rationalities that produce essential technical social practices from which an observer can expect accountability either implicitly or explicitly. This production can be clarified through the economic language. This language makes it possible to evaluate, relate, influence, and change activities of a firm, and subsequently information is created and operationalized.

Karnoe (1995) argued that the value set, norms and attitudes of social groups automatically influence the performance of various technologies in practice, as they unavoidably belong together with, or are explanations of, social practices.

To summarize, we quote Ribeiro & Scapens (2006) (p. 98) "*The social and institutional setting within and around organizations is characterized by a level of complexity which is typical of all social systems. Numerous institutional factors interact and (often) interact with each other. The big challenge is to understand the relations between different issues and factors that are gradually being identified and analyzed in institutional studies. Indeed, we welcome the other extensions of institutional theories which are being explored in the literature, such as the research on "sources of change" by Burns and Baldvinsdottir (2005), the insights of the "negotiated order" perspective explored by Modell (2006), and the use of the concept of "trust" in Abu Kasim (2004) and Busco et al. (2006). Given this proliferation of directions in which the institutional theories are moving, we feel the building of bridges between these various extensions is a promising and increasingly necessary area for further research*".

In the next section, the researcher will provide a general overview of the Egyptian environment where the study will be conducted.

Chapter 6

Egypt

1. Introduction

The modern history of Egypt can be divided into two phases, pre and post 1952. In 1952, a revolution occurred that took the country from being a monarchy to being a republic. The pre 1952 era saw the private enterprises being the overwhelming form of business. There were no separation between ownership and management, as the elite wealthy sector of the population owned and managed most businesses.

The revolution took a more national approach. Businesses were nationalized, and the state owned most of these organizations. A unified accounting system was devised and applied, along with a central decision making policy and control body (The Central commission of Accounting).

In the late seventies, the state switched to a more individual/private sector allowing businessmen to build and run their own businesses. New forms of firms i.e.: corporations were introduced. In the late nineties publicly owned organizations were offered for sale to the private sector after they proved to be an outdated burden on the Egyptian government. Along with that change, and the increase in competition, the need for cost control, better efficiencies, better quality, and improved production methods escalated. Parallel to, and because of these changes/requirements the need for more advanced management accounting methods grew in order to aid these businesses to compete in the fierce markets they became part of.

Techniques like activity based costing, activity based management, total quality management, process re-engineering, and just in time, to mention a few, were introduced. It is notable that not all the techniques were successfully accepted and employed but rather, the ones that were deemed beneficial, faced difficulties until they were

institutionalized (if ever) and became embedded in the systems they were working within.

According to Youssef (2007), most management accounting/performance measurement studies were conducted either in developed countries such as the USA, Japan, and the EU or in other words, in the newly industrialized countries (NICs). However, studies that addressed the developing countries practices were inadequate and insufficient. This study attempts to fill the gap relating to the scarcity of the empirical studies concerning management accounting techniques and the lack of related studies in less developed countries such as Egypt. It also aims to provide useful information which may permit managers and investors to get a better understanding of what to expect when attempting to implement a modern management accounting system.

Finally, as many researchers noted, the last period of the twentieth century saw an abundant number of changes in the manufacturing business environment. These changes dictated the development of new, modern, and more suitable management accounting techniques to allow businesses to compete in this "new and complicated business world".

2. General overview of Egypt as a transitional economy

"Egypt, a country in transition from a socialist to a free market economy suffers from underdeveloped institutions, inept bureaucracy, limited and uncertain resources and inadequate organizational capabilities. Business organizations have developed a number of strategies to deal with this situation. Some companies have clung to the past, sought government protection, focused on the local market and exploited opportunities resulting from the institutional void. These types of strategies are classified as either defender or reactive. Some other companies have capitalized on cheap local resources, sold locally

and abroad, established links with multinational companies developed their internal capabilities and still benefited from government incentives and market imperfections. These strategies are classified as analyzer or analyzer/defender. A common pattern in most is to dominate the market through acquisition or related diversification or to follow unrelated diversification strategy. Companies which operated outside the domain of the government, while benefiting from its incentives, appear to be more viable", Youssef (2003) (Egypt chapter).

Prime, Love & Shaffer (1999) mentioned that uncertainty in transition economies (TE) is higher than in developed countries. This is due to the larger number of elements and more complications in perception. In TEs, institutional changes means changes in the game rules, and the underlying rational of relationships. The institutional context exerts normative pressure on organizations to change. The market context, on the other hand, exerts mostly efficiency-based pressures on organizations, Newman (2000). Lacking the new logic, managers rely on their old logic, such as personalized exchanges, Peng & Heath (1996).

Golden, Johnson & Smith (1995); Gerloff, Muir, & Bodensteiner, (1991) ascertained that factors causing business perception difficulties are more clearly represented in TEs. The business community suffers from a lack of modern business situation analysis. Unavailability and inaccuracy of information in addition to weak internal organizational capabilities do not make this perception easy. Difficulties in establishing cause and effect relationships between events as well as in predicting consequences of responses to events are also expected.

The system of management in Egypt can be characterized as authoritarian-paternalistic, where the top manager exercises considerable power, particularly in financial and human resource issues. Technical managers with an increasing level of sophistication and knowledge are available in all functions. Many companies are applying information technology, at least to replace existing manual systems, but not necessarily as a decision making tool. While these advancements are noticed on the functional level, they are still inadequate in inter-departmental matters. The situation is much better in branches of multinational companies and private companies oriented toward export, notwithstanding the indispensable role of the top manager in an environment still constrained by bottlenecks and a huge bureaucracy. Matrix structure and other dynamic structures are found in companies operating in the communication, information, consulting and technical fields. However, capitalizing the full benefits of these modern structures is constrained by cultural and environmental forces.

2.1 Types of business strategies in Egypt

According to Youssef (2003), given the institutional environment described above, a number of strategies that were adopted by private businessmen can be identified. Miles (1978) introduced a typology of strategies where four types are identified: the *prospector*, the *analyzer*, the *defender* and the *reactor*. *The Prospector* is the most outgoing and opportunistic type and displays a genuine interest in new product and market opportunities. *The Defender* tends to be efficient in the market that he/she is trying to defend. *The Analyzer* maintains a balance between a stable market, new products, and market opportunities. *The Reactor* senses the environment but does not appear to develop suitable responses and as a result exists in a state of continuous instability. The pure

prospector strategy is difficult to find in a country like Egypt due to institutional shortcomings, the scarcity of entrepreneurs and limited original sources of innovation. The other three strategies are more likely to be found as explained below.

Elements of strategy discussed in this section are based on a model developed by Hambrick and Fredrickson (2001). Some of the elements that are relevant to a transition economy include the areas of operation or the type of business the organization is in. This includes product categories, market segments, geographic areas, technologies and stages of value-creation. The second element is the vehicles of growth or the 'how to get there?' question such as internal development, joint ventures, licensing and acquisition. The third element is the differentiators the company possesses such as image, price, service, and product quality. These three elements are the core elements of a certain strategy. The fourth element is the staging of these different moves; i.e., the sequencing of initiatives. The fifth element is how profits will be generated; e.g., through using scale and/or scope economies to achieve low cost or through charging higher prices due to unique services or exclusive product features. This model serves to categorize companies in the Egyptian business environment. These elements of strategy can be applied whether the company is following a prospector, analyzer, defender or a reactor strategy using the classification developed by Miles.

3. Industry in Egypt

According to HSBC (2003), industry and mining accounted for 19.6% of GDP (Gross Domestic Product) in 2001-02, unchanged from the previous year's level. The sector accounted for nearly 14% of total employment in 2001-02 and industrial activity is heavily concentrated in Cairo and the Nile delta.

Egypt produces a wide range of goods, including textiles, processed foods and beverages, building materials, fertilizers, chemicals, vehicles, electrical products, and engineering goods. Food processing and textiles form the bulk of production, but several sectors have gained in importance including furniture, ceramics, pharmaceuticals, metallurgical products, computer software, and engineering industries. Efforts to enhance the role of the private sector in the economy have paid off, with its contribution to GDP rising to 76.4% in 2000-01 compared to 73.8% the previous year. As a result, the private sector grew by 8.5% in 2000-01 as against 7.1% in 1999-00. The private sector increased its share of activities in manufacturing and mining by 88%. Notably, the activities of the electricity and energy industries were transferred to the business.

4. Recent Development in the Egyptian Economy

During the last decade, Egypt has been preparing and planning a strategy for continued and steady economic growth. Starting 1991, the Egyptian government has instituted an Economic Reform Program that has transformed Egypt into a vital and prosperous emerging market. This was due to a set of economic policies, which insured that *market forces* are given maximum potential to drive growth and employment. The legacy of centralization and public sector domination of the economy is over. Today, there is universal recognition that Egypt has become one of the most stable emerging markets.

Over the last year, Egypt's economy witnessed a noticeable turnaround. Consecutive financial crises that hit many emerging economies started in 1997 and lately the September 11th events have negatively impacted the Egyptian economy. However, the Egyptian government promptly embraced the necessary policy measures that put the economy back on track.

4.1 The macro economy[1]

Macroeconomic discipline has been maintained and restructuring and reforms are ongoing process. The annual growth rate, although below its projected rates, is still growing at more than acceptable rates. The upcoming fiscal reforms include a renewed commitment to fiscal stability and efficient debt management.

4.2 The capital market[2]

Egypt's robust economic profile is also reflected in the growth of its capital market, which is a result of ongoing privatization and legislative developments aimed at reforming current practices to adhere to international standards. Market capitalization rose from $4 billion to $43 billion over the last five years, with over 1056 companies listed on the stock market. Traded volume for the first half of 2000 surpassed $9 billion, compared with $5 billion for the same period in 1999 (for example). The average daily traded volume increased by 50% over the last year. Egypt's Capital Market is currently equipped with one of the most advanced trading floor and a highly sophisticated interactive web-site, with E – Business solutions, that has no parallel in the Middle East. Morgan Stanley Capital International (MSCI), encouraged by Egypt's commitment to privatization, decided to include Egypt in its Emerging Market Free index (EMF) starting May 2001.

4.3 Regulatory framework for the Financial System

Egypt's reform efforts also include strengthening the financial system, and ensuring that it ranks at par with international practices. Substantial progress in improving banking and

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[1] Link for more details on macro-economic indicators with: www.economy.gov.eg

[2] Link for more details on capital market www.egyptse.com

supervisory standards, and drafting new rules and regulations will help strengthen and diversify the financial system.

The central depository law (drafted with assistance from one of the top US firms) was ratified by parliament in the spring and should help enhance the efficiency of settlement of transactions at the Stock Exchange.

A number of other laws have been ratified by the Cabinet and are expected to be passed by The Parliament in its coming legislative round. These include the Mortgage Law, and a new Capital Markets Law that is being drafted with assistance from leading US firm. Recently a code of conduct for brokers and dealers was issued, and a decree organizing the activities of bond dealers represents a new development in the fixed income markets for Egypt.

A prime ministerial decree granting exclusive marketing rights to pharmaceutical products under patent-in line with Egypt's obligations in the World Trade Organization (WTO) (Trade-Related Intellectual Property Rights Agreement - TRIPS) was issued in March 2000, and will soon be followed by a data exclusivity decree. These two developments do not withstand a new Intellectual property rights (IPR) law that will soon be discussed by Parliament, providing the foreign investor with the necessary safeguards. In the meantime, Egypt has no outstanding obligations under the TRIPS agreement. Other laws in the pipeline are securitization/leasing law, the economic zones law and anti-trust and competition law. In addition, the investment law was recently amended to facilitate business expansion.

A new book entry registry for government securities is being finalized and represents an important step towards strengthening the domestic debt market in order to foster

stabilization efforts and enhance private investment. Together with the recently issued Central Depository and Settlement Law this should help increase liquidity in the market, simplify transfer of ownership, ensure safety of transactions, reduce time and expenses transfer of ownership of securities, and help encourage portfolio investment through establishing international best practices.

Other financial sector reforms include the enacting of insurance legislation in 1998, which permits private sector entry into the capital of Egypt's three state-owned insurance companies. The new law also removed all restrictions on minority foreign ownership of insurance firms and abolished the ban on service by foreign nationals as corporate officers. Private sector participation in the insurance sector should help increase domestic savings to finance investments and increase economic growth rates.

4.4 Trade reform

In addition to the ongoing modernization and restoration of the economy, free trade and liberalization, essential forces to growth are re-emerging as a new focus of the government. Egypt has concluded negotiations with the EU, and an association agreement was signed. And over the past few years, Egypt has concluded free trade agreements with a number of Arab countries, as well as an agreement with the Common Market of East and South Africa (COMESA). We have also signed a Trade and Investment Framework Agreement (TIFA) with the U.S with an ultimate objective of reaching a Free Trade Agreement. The government is also taking other important steps towards opening the economy to international trade. In 1998, Egypt reduced -one-sidedly- the maximum tariff rate on most products from 50 percent to 40 percent and consolidated rates of 35 to 45 percent to 30 percent. Egypt's average trade-weighted tariff

was 15 percent in 1998. The government lifted its import ban on most textiles on January 1st, 1998 in compliance with its obligation under the WTO Agreement on Textiles and Clothing. The remaining import ban on apparel was eliminated in 2001.

4.5 Reduced role of the Government in the production of goods and services[3]

In addition to the privatization program of more than 130 public companies, the government is taking important steps towards reducing its role in the production of goods and services. It plans to sell 20 percent of Egypt Telecom through IPO. In 1998 the Government amended a 1964 law establishing the General Egyptian Maritime Organization to permit the private sector to carry out most maritime transport services. This measure ended the Government's long-standing monopoly in this sector. Egypt also passed a law permitting private firms to build and operate new airports. Also, as part of national strategy to increase tourism, international airlines will now be allowed to operate international flights to airports in resort areas. These developments should help strengthen the capacity to deal with external vulnerabilities, and provide a structured and friendly environment for business, foreign direct investment and portfolios inflows.

4.6 Egypt's Sovereign Credit Rating

According to Al-Sayyid (2003), the positive development of the economic reform program helped Egypt receive an investment grade in credit rating by international rating agencies since 1997. Fitch Ibca, in its report of 2000, maintained the same rating of August 1997 at (foreign currency BBB-, local currency A-). Standards & Poor issued a report confirming the same rating.

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[3] Link for more details on privatization: www.mpe-egypt.com

Moody's in 1999 upgraded Egypt's sovereign rating from speculative to investment grade at the level Baa-1. Thomson Financial Bank watch has also maintained sovereign risk rating at BB+ for Egypt.

These agencies pointed out in their reports that Egypt's strong growth performance, inflation record, and external payment flexibility compare favourably with its peer group. They also noted that the stresses of 1997-1999 of falling oil prices, the decline in tourism, and the Asian and Russian crises demonstrated the strength of Egypt's macroeconomic and external position. They added that the business environment has improved and the government's commitment to liberalization and private sector growth is clear.

5. Egypt (as a developing economy) & Institutional Economics[4]

In this section we concentrate on three main issues: The importance of institutions in developing healthy market economies; the sequence of institutional building and reform; and finally the institutional economics approach in explaining how institutions are formed.

- *The Importance of Institutions in developing healthy market economies:*

There is an overall consensus that institutions are needed to support markets function properly. According to the World Bank Development Report, *"Institutions support markets by helping to manage risks from market exchange, increasing efficiency and raising returns hence reducing the transaction costs arising from inadequate information, incomplete definition and enforcement of property rights"* World Bank, (2001). Also, there is an overall accord that there is no 'generally accepted' kind of institutions and hence institutions that fit the developed economies are different from

[4] This section benefited from the work of Assistant Professor Ahmed Farouk Ghoneim of Cairo University.

those that are suitable or applicable within the economic environments of developing countries. World Bank (2001); Hoekman (1997); World Bank and OECD (1998); Hoekman and Holmes (1999). Consecutively, it can be safely argued that developing countries experiencing transition to market economies (i.e. Egypt) are definitely in need of new forms of institutions that are not necessarily those adopted by industrialized countries and that are needed to ensure the well functioning of their growing market economies. This leads us to ask a question of what sequence of institutional building should be adopted?

- *The Sequence of Institutional Building and Reform:*

The ultimate goal of institutional reform in developing countries is fairly clear. That goal can be described as creating a market-friendly business environment, with supportive government services that will ensure a smooth performance. The mere agreement on this ultimate goal does not resolve the crucial issue of how to get there. One way to tackle this question is through sequencing.

According to Ghoneim (2002), it is generally agreed that there are clear steps that should be followed in order to reach the correct sequence. The first step is to *recognize inadequate institutions* that need to be tackled. In other words, asking which institution is missing or not working properly. The next question to be asked is what *functions* are needed from the new institutions to perform. In general, institutions that support market transitions perform three functions: smoothing information asymmetries (that is ensuring that all market participants have access to reliable information), defining and enforcing property rights and contracts, and regulating competition (Islam, 2002). Finally, we should concentrate on the *relevant institutional design or structure* that fits with the

overall institutional environment prevailing in the economy. The diversity of the content of those three steps across different countries led institutional economics' theorists to conclude that there is no blue print for institutional development across all countries. In other words, there is no agreed upon sequence of institutional development (Islam, 2002; Clague, 1997) and that each country should follow the steps identified above following its own priorities and taking into consideration the differences in constitutional orders, cultural endowments, and inherited institutional arrangements – the facts implying that institutional reforms are certainly path dependant. However, there has been a shared observation by a number of experts that strengthening the government administration and/or civil society is a cornerstone for the success of any institutional reform and should be implemented at the early stages of economic development (Clague, 1997).

The institutional economics approach underlines the need for incentives to undertake reform. This is contrasted with the "incentive free" social engineering approach, Clague (1997). Institutional economics emphasize that the requirements are reform strategies based on a careful understanding of the incentives facing actors in the current situation and on a thorough examination of different alternatives for changing the institutional equilibrium (Clague, 1997).

- *An Institutional Economics Model of Building Institutions:*

After agreeing on the steps to put institutions together, and taking in consideration the differences between different countries in identifying their own priorities for institutional reform, a simple model that describes the evolution of institutions will be discussed.

Once it is decided what type of institution is required, we need to reach the right decision and build consensus for reform. This requires investigating both the demand and the

supply sides. For some institutional reform programs, the demand is already there; for others, various groups might need to be convinced; and still for others, there is neither opposition nor support. The demand for institutional change is normally made either by agents who expect that new arrangements will provide them with better opportunities of capturing gains that are lost under existing arrangements (greater efficiency), or by actors dissatisfied by the current distribution of income or wealth. Important factors motivating the demand for institutional change are "relative product and factor prices, the law making process, level of technology, and the size of the market". Zaki (1999)

On the supply side, institutions are created by principals (political rulers, or the owners of resources) to govern their relationship with other principals and with their agents (citizens, bureaucrats, employees, etc.) and that these principals are motivated to create institutions that maximize their individual utility. Policymakers need to be aware of the incentives the new institutions will create— that is, the rewards and penalties for not complying with new rules and regulations— which will be heavily influenced by the kinds of institutions that exist already. See Islam (2002). The factors that influence the calculus of the political decision makers will include their vision and knowledge, and the expected costs of designing and implementing the new institutional arrangements— which in turn depend on "getting the factor prices right". These include the costs of the required physical and human infrastructure) required for the design and implementation of the new institutional reforms. It is worth mentioning here the complexity of this issue since institutional change never occurs in vacuum. It alters the impact of existing laws, so identifying the groups or individuals the new institutions will affect is crucial. Hence, "getting the prices right" is not confined here to the monetary value, but to the cost of the

terms of alternative choices (of institutional arrangements) available in the social, political and economic domains. Zaki (1999)

Integrating the demand and supply sides together imply that the pressure of a competitive market as suggested by North (1991), is the most viable mechanism for selecting the most efficient economic institutions, forcing out these that fail to perform in a 'utility maximizing way'. The market's competitive pressure will select socially beneficial forms of economic organization, regardless of the intentions of the actors. If, instead, the creation of institutions is left in the hand of any dominant actor— such as the state, or a cohesive self dominant class— the product will be institutional rules that will give that actor a strategic advantage vis a vis other actors, regardless of how socially sub optimal the outcome of these institutions may be. In sum while demand pressures are important, taken alone they are insufficient to explain the path of institutional change. Consideration of the political economy is essential, and the political and economic costs and benefits to the ruling elites are the key to explaining the nature and scope of change. Zaki (1999).

5.1 Egypt's Principal Industrial Competitive Strengths

According to a report submitted by The Ministry of Trade & Industry (2006), Egypt's development program possesses a clear competitive advantage in many aspects when compared to other development programs in the region and beyond. Among Egypt's strengths that match or exceed those of competing zones are:

- Unique location bridging Europe and the Far East.
- Market access.
- Abundant trainable labour competitively priced.
- Lowest utility tariffs (Electricity, water, telecommunication) in the MENA Region.

• Lowest land price and construction cost in the MENA region.

• Sea ports servicing the main shipping lines of the Mediterranean and Indian Ocean.

• Suez Canal.

• International airports servicing all destinations of the world.

• Macroeconomic and Political Stability.

• Guarantees against nationalization and expropriation of projects.

• Output of the project is not subject to price control.

• Projects are allowed to repatriate their capital and profits.

• Foreign experts' salaries are exempt from income tax if their stay in Egypt is for a period less than one year.

• Imported capital assets and construction materials required to establish an approved project are subject to a unified import duty rate of 5%.

• The choice between buying and leasing (50 years renewable) of land for industrial parks.

The table below presents a comparison of key manufacturing costs between Egypt and selected countries:

Cost/Item	Egypt	Jordan	Turkey	India	Italy
Labour Hourly Wage	.40	.90	2.8	.50	15
Electricity/KW	.03	.05	.077	.086	.09
Water/M3	.21	1.8	.46	.70	.28
Natural Gas/M3	.025	N/A	.26	.24	.21
Construction/M2	120	200	180	140	480

Table (6.1): Adapted from (Industry, 2004) (all numbers in $ US)

6. Market Access Programs

Some of the most attractive market access programs to the World's largest markets are available through Egypt. Market access conditions combined with Egypt's manufacturing capacity make the country an ideal export platform and a key factor in attracting Foreign Direct Investment. Signed market access agreements include:

- Membership of the World Trade Organization (WTO).
- An Association Agreement with the European Union (EU) which provides Egyptian exports duty-free access to the EU markets.
- Membership to the Arab Free Trade Agreement (AFTA).
- Membership of the Common Market for East and Southern Africa, (COMESA) comprised of 20 countries and an aggregate population of about 380 million.
- A Qualified Industrial Zone (QIZ) agreement, which provides duty-free and quota free treatment for products exported to the USA market.

In the following section the researcher will discuss briefly the objectives of some market programs.

6.1 Main Objective of COMESA

- Establish the Common Market for East and South Africa (COMESA). It is considered to be a new step closer to the African Economic Community.

6.2 Main Objectives of the common market

- To attain sustainable growth and development of member States by promoting a more balanced production and marketing structure.

• To promote joint development in all fields of economic activity, in addition to jointly adopting macroeconomic policies and its programs to improve the welfare of the citizens and encourage close relations between member States.

• To co-operate in the creation of suitable environment for domestic, foreign, and cross border investment.

• collaborate in strengthening the relations between the common market and the rest of the world.

• To cooperate in driving peace and security process between member States so as to strengthen the economic development ties in the region.

6.3 Main Objectives of Egypt - EU Partnership Agreement

• Establishing an adequate framework for a political dialogue to develop close political ties between the parties.

• Gradual liberalization of trade in industrial goods and agricultural products as well as, services and capital movement.

• Developing balanced economic and social relations through mutual cooperation.

• Contributing to the process of economic and social development in Egypt.

• Encouraging regional cooperation to promote peaceful coexistence and economic and political stability.

• Promoting cooperation in other fields of mutual interest.

6.3.1 Main Benefits from the Egypt - EU Partnership Agreement

- Both parties shall benefit from trade liberalization of tariff and non tariff barriers within the Agreement.

- Egyptian exports of manufactured goods to the EU shall be exempted from tariffs or any other duties and fees having similar effects from the date the Agreement entered into force.
- Manufactured goods exported from EU to Egypt are to be exempted from all tariff and non tariff barriers having the same effect according to the following time frame:
- (GOODS IN ANNEX 2[5]) Tariffs are to be gradually eliminated over 3 years. A reduction of 25% has been applied on first of January 2004, 2005, 2006and 2007.
- (GOODS IN ANNEX 3) Tariffs will be reduced gradually in the following manner: 10% after 3 years from the date the Agreement enters into force to be followed by an annual tariff reduction of 15% over 6 years until tariffs are fully eliminated.
- (GOODS IN ANNEX 4) Tariffs will be reduced gradually in the following manner: 5% after 5 years from the date the Agreement enters into force to be followed by a 10% reduction on the following year, followed by a reduction of 15% annually for 5 years and 10% reduction in the final year.
- (GOODS IN ANNEX 5) Tariffs will be gradually reduced by 10 % annually after the elapse of 6 years from the date the Agreement enters into force, until tariffs are fully eliminated.

6.4 Main Objective of Pan Arab Free Agreement (PAFTA)

- The agreement on Facilitation and development of Trade among Arab States to establish the Pan Arab Free Trade Area within 10 years.

[5] Annex is a list of specific goods grouped according to a certain criteria.

6.5 Main Objective behind the Establishment of the Free Trade Area (FTA)

- Elimination of Customs duties and others fees and duties having similar effects was implemented as follows:

- 10 % annual reduction on first of January of each year from 1998 to 2003 and by 20 % got the years 2004 and 2005.

- Elimination of Non Tariff Barriers (NTB's)

Member States should eliminate all non tariff barriers, including Administrative, Monetary, Financial and Technical barriers.

6.6 The Quiz [What is a Qualifying Industrial Zone (QIZ)?]

- A QIZ is any area that has been specified as such by the United States Government and that has been designated by Egyptian authorities as an enclave or a closed area where merchandise that are the requirements of qualifying QIZ products may enter U.S markets without payment of duty or excise taxes and without the requirement of any reciprocal benefits.
- Only merchandise produced according to QIZ requirement are allowed. No other stipulations such as home grown raw materials are required as is the case of NAFTA and all FTA agreements with the U.S.
- The QIZ represents an unprecedented opportunity to gain duty-free and quota free access to the U.S. Market. Thus, eligible products will be more price competitive.
- Designation of a QIZ makes the products produced in these zones eligible for duty-free entry into the U.S. provided they meet certain criteria. In many cases this will mean that products produced in these zones can enter the U.S, at cheaper costs than would 'more competitive products' from other countries (i.e. China).

- Besides increasing Egypt's exports to the U.S. market, these QIZ areas will provide significant incentives for foreign investment in Egypt, especially from the U.S. and Europe as well as from Arab and East Asian Countries.

6.6.1 Main advantages of being located in a QIZ

• Assured duty and tariff-free access to the U.S. market.

• No quotas to U.S. markets manufactured in the QIZ zones.

• No restriction of project ownership.

• No time limits or renewal requirements.

• Imported materials are not subject to customs duties.

Examples of offered site for Industrial Zones

• Total new industrial zones: 30,000,000 m2

• No. of Sites offered: 10 Sites

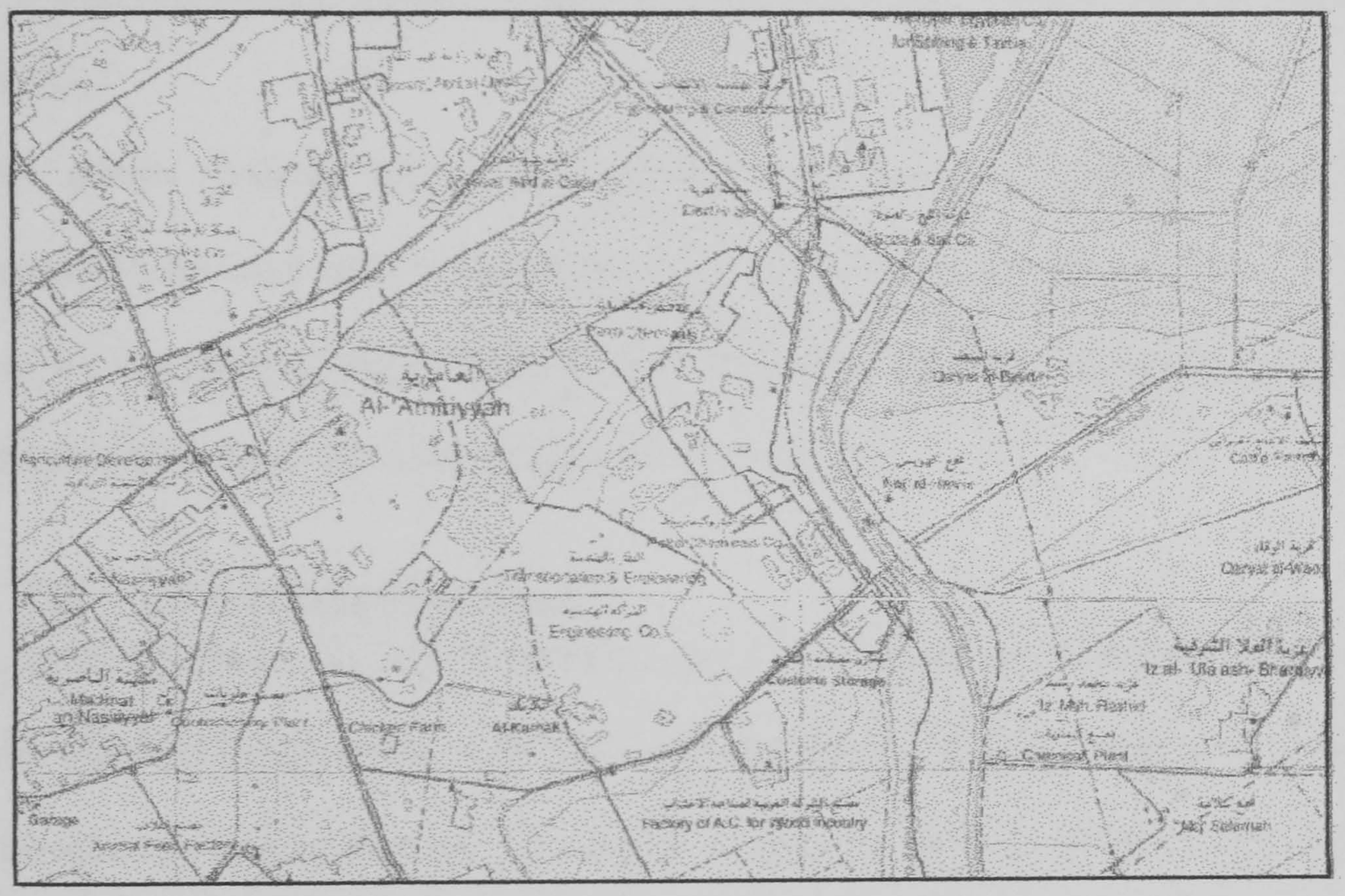
• Location: 4 Cities

- Borg El Arab City: 11,000,000 m2
- 10th of Ramadan City: 5,000,000 m2
- El Sadat City: 5,000,000 m2
- 6th of October City: 9,000,000 m2
- Note that Borg El Arab industrial city is the largest of the four available industrial zones in Egypt.
- Also note that Egypt is moving rapidly from being a controlled centrally managed economy to being an open economy competing freely with international market forces.

7. The Research setting (City Of Borg El Arab)

According to (Industry, 2004), New Burg El Arab City lies 60 kilometres to the southwest of Alexandria, some seven kilometres from the Mediterranean coast. The location is on high ground and the area enjoys a particularly healthy climate all year round. New Burg El Arab City is seen as the natural extension of Alexandria.

7.1 City General Plane



Source: **Ministry of State for Environmental Affairs, Egypt**

The city has a total surface area of 200 square kilometres, of which the built area occupies 102 square kilometres. It is comprised of 10 residential districts and five industrial districts, each residential district containing eight to nine neighbourhoods. The central hub of the city, in which the main services are concentrated, is situated in the middle. The city will take 570,000 inhabitants at its fullest extent and provide

approximately 160,000 employment opportunities, with 122,000 housing units. The following table sets out the land use plan for the city.

7.2 Residential Area

Equipment of the First Residential District with utilities is complete, as is phase one of the Third Residential District. Equipment of the Second Residential District, the rest of the Third, and the Fourth Residential District are underway.

The construction of 560 middle-income housing units in the Third Residential District is underway.

8,241 model housing units (above-average, low-cost, and economic) have been completed and most have been handed over to their owners. The hand-over of units proceeds according to phases and a defined timetable. Spending on housing projects to date amounts to some 164 million Egyptian Pounds.

7.3 The Industrial Zone

The industrial zone of the city has been located to its east and south so that it will have no environmental impact on the city. The zone consists of 22 square kilometres currently distributed among four districts. Two further districts (extensions of the Fourth and Fifth industrial districts) are planned in addition to areas set aside for workshops and small industries.

There is also an Industrial Zone Services Centre, which includes a training centre. Factories in production provide job opportunities for approximately 21,000 workers.

7.4 City Development

New Burg El Arab City has made significant progress over the past four years in increasing its growth average. With the increase in services offered, the average of

human occupation there has increased and the gap between the volume of completed infrastructure and housing (on the one hand) and the number of permanent residents (on the other) has decreased.

The number of residents has increased from around 7,000 in 1996 to around 50,000 in 2002. This is a clear positive indicator of a high average increase of settlement in New Burg El Arab City over the four past years. The city has become an area attractive not only to those who work there, but also to young people looking for a better life style far from the overcrowding of Alexandria.

In addition to the permanent residents, there are also around 25,000 workers in the factories and other establishments of the city who come to New Burg El Arab City on a daily basis and make use of a great many of the services available there. The number of working factories in New Burg El Arab's industrial zones has increased from 279 to 394 over the past your years.

The City Development Agency and the Board of Trustees of New Burg El Arab are exerting the greatest possible efforts to improve the existing services and add new services to absorb the current and expected increase in residents over the coming years. It is worth noting that the services offered in the areas of education, health, and commercial activities do not embrace merely the residents of the city but extend to those of nearby local units such as Bahig, Abu Sir, and El Gharbaniyyat, who are looking for better services in these fields. Thus, New Burg El Arab City is in process of becoming a development hub.

By contacting the City Development Agency and filling in the form prepared for this purpose. The City Development Agency advertises the sale of land for industrial projects and residential land.

Investors wishing to reserve plots of land for industrial projects present a request to the Agency's Realty Affairs Administration with a request for the completion of the relevant reservation form, for a small charge. Subsequently, they present an endorsed check made out to the New Burg El Arab City Agency to the value of 25 percent of the cost of the land as an advance payment for reservation with the remainder to be paid in three instalments over three years from the date of receiving the land. The investor is granted a period of three years to prove his seriousness and complete the set up of the project for the agreed purpose. Failing this, the allocation is cancelled. Payment for residential lands is made as follows:

- 25 % advance payment on receipt of the land.
- 15 % without interest one year after receipt of the land.
- 15 % two years after receipt of the land.
- 15 % three years after receipt of the land.
- 15 % four years after receipt of the land.
- 15 % five years after receipt of the land.

Investors enjoy all custom and tax exemptions permitted under Law 91 of 1983 relating to customs exemptions. Owners of industrial projects enjoy priority in reserving housing units and in reserving plots allocated for housing in the city.

8. Conclusion

Egypt is the most populous country in the Arab world, and the second most populous in Africa behind Nigeria. A middle-income nation of more than 70 million people, with a diversified economy that has historically performed below its potential, Egypt has been implementing extensive structural economic reforms starting the 1990s. Strengthening macroeconomic indicators in recent years provide ground for optimism that the reform process has paved the way for a period of more rapid modernization and solid economic growth. The rate at which the country's population is increasing remains quite high, at around 1.7 percent annually, although it is slowly decelerating. Providing sufficient employment for large groups of young people entering the workforce each year remains a great challenge.

With all the treaties signed, the ever growing potential amount of business (especially international business) starting in Egypt, and the firm requirements of international management running these business, the need for more modern, up-to-date, competition-sensitive and flexible management accounting techniques is rapidly growing. We can predict that target costing -being an example of these techniques- is going to be in highly demand.

On the other hand, being an 'imported' technique, it will need to be adjusted or fine-tuned to better fit in the Egyptian environment. In the following chapters, the researcher will try to unveil some of the most important institutional factors that have to be taken into consideration when introducing and implementing this technique.

Other reasons for choosing Egypt as a research field are:

- The lack of management accounting studies in the developing countries –Egypt being one of them.

- Access to data will be easier as the researcher is familiar with the environment, social structure, accounting practices, and economic and political statuses prevalent in the country

Chapter 7

Research methodology

1. Introduction

According to Cooper & Schindler (1998) "*Research can be defined as an organized, systematic, data- based, critical, objective, scientific inquiry or investigation into a specific problem, undertaken with the purpose of finding answers or solutions to it. In essence, research provides the needed information that guides people to make informed decisions to successfully deal with problems. The information provided could be the result of a careful analysis of data gathered firsthand or of data that are already available (in company, industry, archives, etc.).Data can be quantitative (as generally gathered through structured questions) or qualitative (as generated from the broad answers to specific questions in interviews, or from responses to open-ended questions in a questionnaire, or through observation, or from already available information gathered from various sources)*". (p. 24)

According to (Foster and Young, 1997b), in order to define management accounting research it is necessary to define management accounting.

While there are many definitions of management accounting, they followed the Institute of Management Accountant's (1997) draft definition, "*Management accounting is a value adding, continuous improvement process of planning, designing, measuring, and operating non-financial and financial information systems that guides management action, motivates behaviour, and supports and creates the cultural values necessary to achieve an organization's strategic, tactical and operating objectives.*" Management accounting research, then, is "*the process of using rigorous methods to explain and/or predict: (1) how changes to an existing management accounting system will affect management actions, motivation and organizational functioning, and (2) how internal and external organizational forces will affect management accounting system design and change*".

(Atkinson and Shaffir, 1998) said that "*Management accounting provides information intended to influence the behaviour of individuals. Therefore, field research in management accounting invariably focuses on how people, either acting individually or in groups, react either to management accounting information, such as cost or productivity data, or management accounting systems, such as control or planning systems*". (Vol. 10)

In addition to reacting to management accounting information, and to management accounting systems, people individually or in groups, also abide to the institutions governing the internal/external environment within which their organizations operate.

This chapter aims to clarify the methodological foundations of the research. In other words, explain the link between the chosen theoretical framework -Institutional Economics/Sociology- and the research methods utilized.

(Burrell and Morgan, 1979) stated that methodology refers to the methods and steps used to conduct research. (Youssef, 2007) mentioned that "*any methodological position consists of three elements; namely, Ontology, Epistemology, and research paradigm*". This chapter will briefly discuss these elements with respect to the chosen framework.

At the end, this chapter will include details of the questionnaire preparation, design, and administration, in addition to the overall environment within which the administration took place.

2. Research Ontology

(Goles and Hirschheim, 2000) stated that ontology refers to the nature of the world around us; in particular, that slice of reality which the scientist chooses to address. According to them, there exist two extreme positions: "*Realism which postulates that the universe is comprised of objectively given, immutable objects and structures. These exist as empirical entities, on their*

own independent of the observer's appreciation of them. Relativism or instrumentalism, at the other end holds that reality is a subjective construction of the mind. Socially transmitted concepts and names direct how reality is perceived and structured; reality, therefore, varies with different languages and cultures. What is subjectively experienced as an objective reality exists only in the observer's mind"

Youssef (2007) stated that "*questions of social ontology are concerned with the nature of social entities which are the essence of the phenomenon under investigation. The central point of orientation is the question of whether the social entities can and/or should be considered objective with a reality external to social actors as opposed to being social constructions built up from the perceptions and actions of social actors*" (p. 245)

As far as this research is concerned, management accounting techniques proved to be numerous and versatile. Organizations use traditional management accounting techniques (like budgeting) and modern ones (like target costing). Youssef (2007) and others argue that the phenomenon along with using questionnaire surveys as the main method of data collection expose some doubt around this realism ontology. According to them, respondents to different questions in the survey would vary dramatically according to their experiences, beliefs, positions, etc.... which is a supporting position of the relativism ontology.

Based on this line of analysis, this research moves towards relativism according to the methodology employed.

3. Research Epistemology

According to (Burrell and Morgan, 1979), Epistemology can be defined through two streams of knowledge; Positivistic and Anti-positivistic. The first approach seeks to explain and predict the occurrences in the social world by searching for regularities and causal relationships

between the elements constituting that social world. Anti-Positivistic, on the other hand, shows that the social world is essentially relative and can only be understood from the point of view of individuals who are directly involved in the activities being studied.

Goles & Hirschheim (2000) as referenced in Youssef (2007) stated that "*Through the centuries, positivism has enjoyed great success. It has had an especially happy relationship with the physical sciences where a tremendous growth in knowledge has been experienced. Throughout history, individuals have sought to apply positivism to the human realm, bolstering or modifying its conception as necessary*".

The validity of positivism as a train of thought in social sciences was criticized [Berger & Luckmann (1967), Fay (1975), Lincoln & Guba (1985), and Tashakkori & Teddlie (1998)]. Positivism looks at reality as being objective, concrete, and single. The main focus is on what is general, average, and representative in order to make possible generalization and prediction. Positivism (which is more inclined towards quantitative research) differs from other paradigms like interpretivism (better dealt with through qualitative methods) as the first persists on the domination of the positivist paradigm in many areas of social research.

Interpretivists, on the other hand, claim for multiple and socially constructed realities. Their focus is on what is specific and unique in order to understand and generate interpreted meanings, but, yet, fail to explain and justify how and why their qualitative approaches are feasible, Youssef (2007).

4. Research Paradigms

Burrell & Morgan (1979) as referenced in Youssef (2007) introduced a paradigms' typology for the analysis of social and organizational theories. Table (7.1) shows the matrix they derived.

Radical Change

Subjective	*Radical Humani*	*Radical Structuralist*	**Objective**
	Interpretivist	*Funcionalist*	

Regulation

Table 7.1: Burrell & Morgan four paradigms Adapted from Youssef (2007)

Silverman (1970); Burrell & Morgan (1979); Ali (2000); and Goles & Hirschheim (2000) agreed that *Functionalists* will be involved with providing explanations for the present situation or overall agreed-upon status. The main idea is that the researcher is totally independent from the environment under study. The main goal is to reach an explanation of how separate elements of a system (i.e. social) mesh together to create an integrated whole.

"*Interpretivists* look for clarification within individual subjective inputs. In other words, they look forward to give meaning to events under research through analysing how people perceive their realities. Thus, this paradigm describes the world through the researcher' consciousness.

The *radical structualists* have a view of society and organizations, which emphasizes the need to overthrow or transcend the limitations placed on existing social and organizational arrangements. It simply assumes that contemporary society is characterized by conflicts and contradictions which generate some radical change through political and economic crises and revolutions. Finally, the radical *humanists* seek radical change. They stress the role that different social and organizational forces play in understanding the process of change" Youssef (2007).

According to Gioia & Pitre (1990), the identification of paradigms as separate and mutually exclusive may be exaggerated. They added that there are no clear boundaries between one

paradigm and the other. They said "*it is very difficult, if not impossible to establish exactly where one paradigm leaves off and another begins*".

To overcome this problem, they introduced the notion of 'transition zones'. They argue that pluralism could bridge between these zones, Youssef (2007). (Figure 7.1)

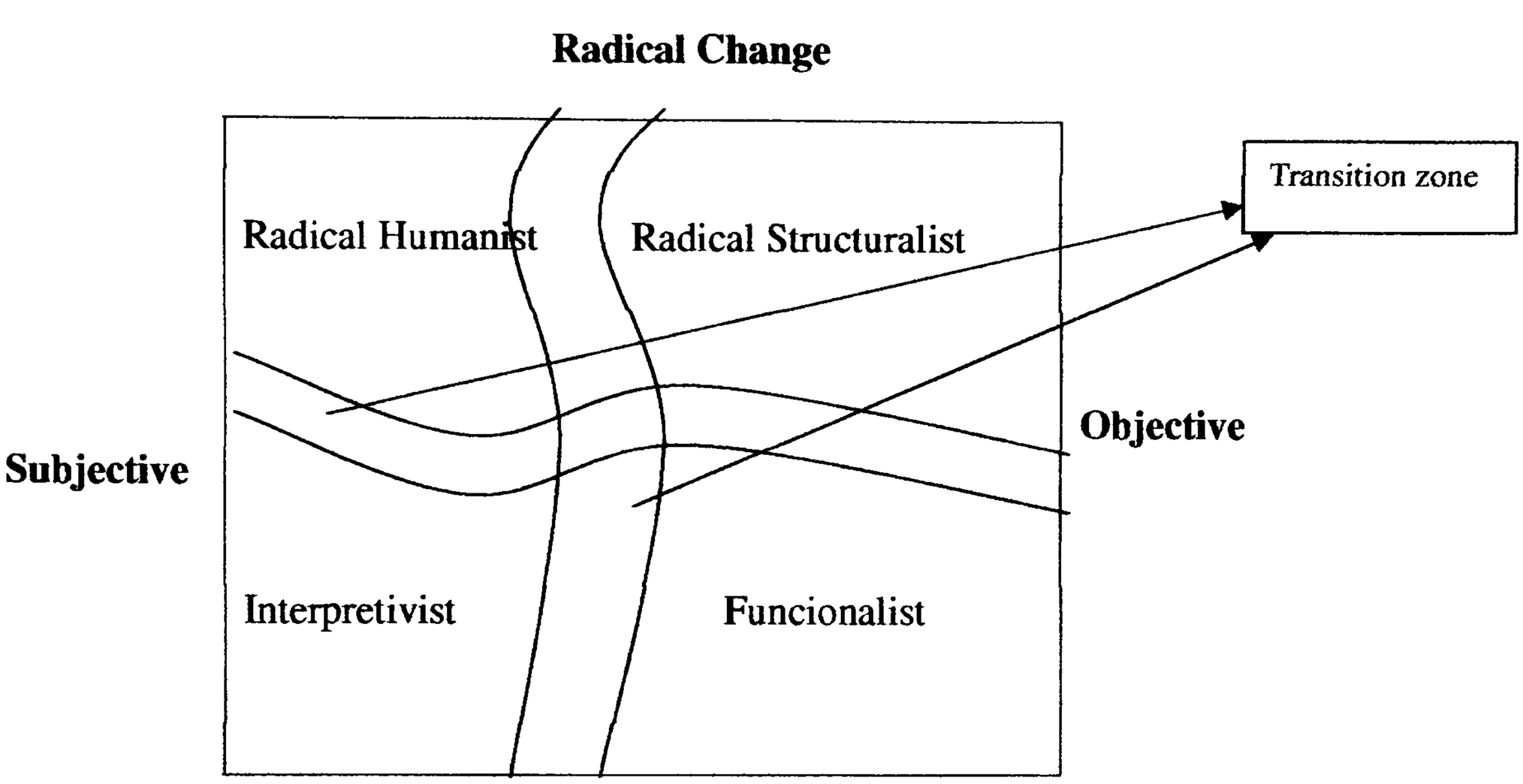


Figure 7.1: Burrell & Morgan four paradigms with transition zones Adapted from Gioia & Pitre (1990)

The limitations existent in the different research approaches encourage, or even dictate, the adoption of a pluralistic method. Jackson (1999) mentioned that researchers ought to use a 'meta-methodology' in order for the advantages of different methodologies to help overcome complicated problems. In other words, the nature of the problem under investigation should influence the method/paradigm employed, not the other way around (the boundaries of the paradigm/approach should not restrain the method used). The use of institutional economics and new institutional sociology as frameworks will enable the researcher to adopt a pluralistic research approach (internal and external), thus will provide strength to the findings.

5. Inductive vs. Deductive research

According to Landman (2000), two main research approaches exist which are the **inductive approach** and the **deductive approach**. *Induction* refers to "*the processes by which conclusions are drawn from direct observation of empirical evidence*". (Figure 7.2) These conclusions are then fed into the development of theory. Such research is not hypotheses-driven; instead, theory is generated and built through the analysis of, and interaction with, the empirical data. The researcher looks for patterns in the data and, in particular, relationships between variables. Generalizations in this type of research are sought from specific to other, wider context, as opposed to deductive research strategies. This type of research and theory is usually, but not exclusively, associated with the interpretivist research tradition and qualitative research strategies.

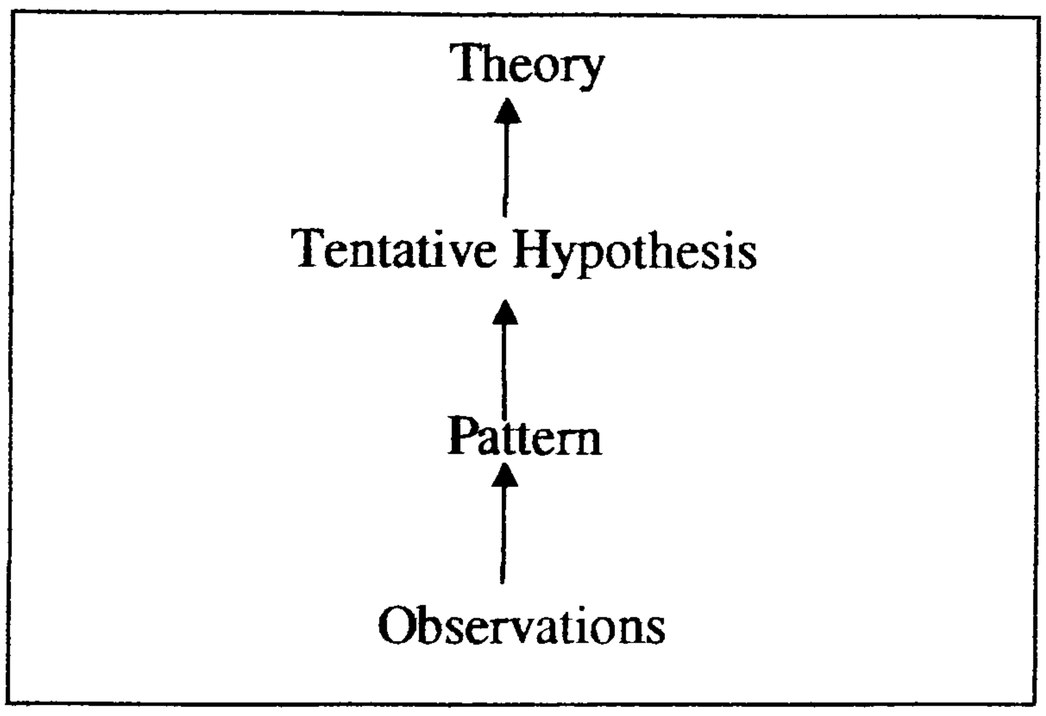


Figure 7.2: The steps of inductive research. Adapted from Bryman (2001)

Deductive theory and research, on the other hand, is a type of strategy in which theory informs research at the outset and hypotheses dictate what evidence the researcher looks for. Data are then collected to confirm or falsify the hypotheses. Deductive theories, in contrast to inductive theories," arrive at their conclusions by applying reasons to a given set of premises". Landman (2000)

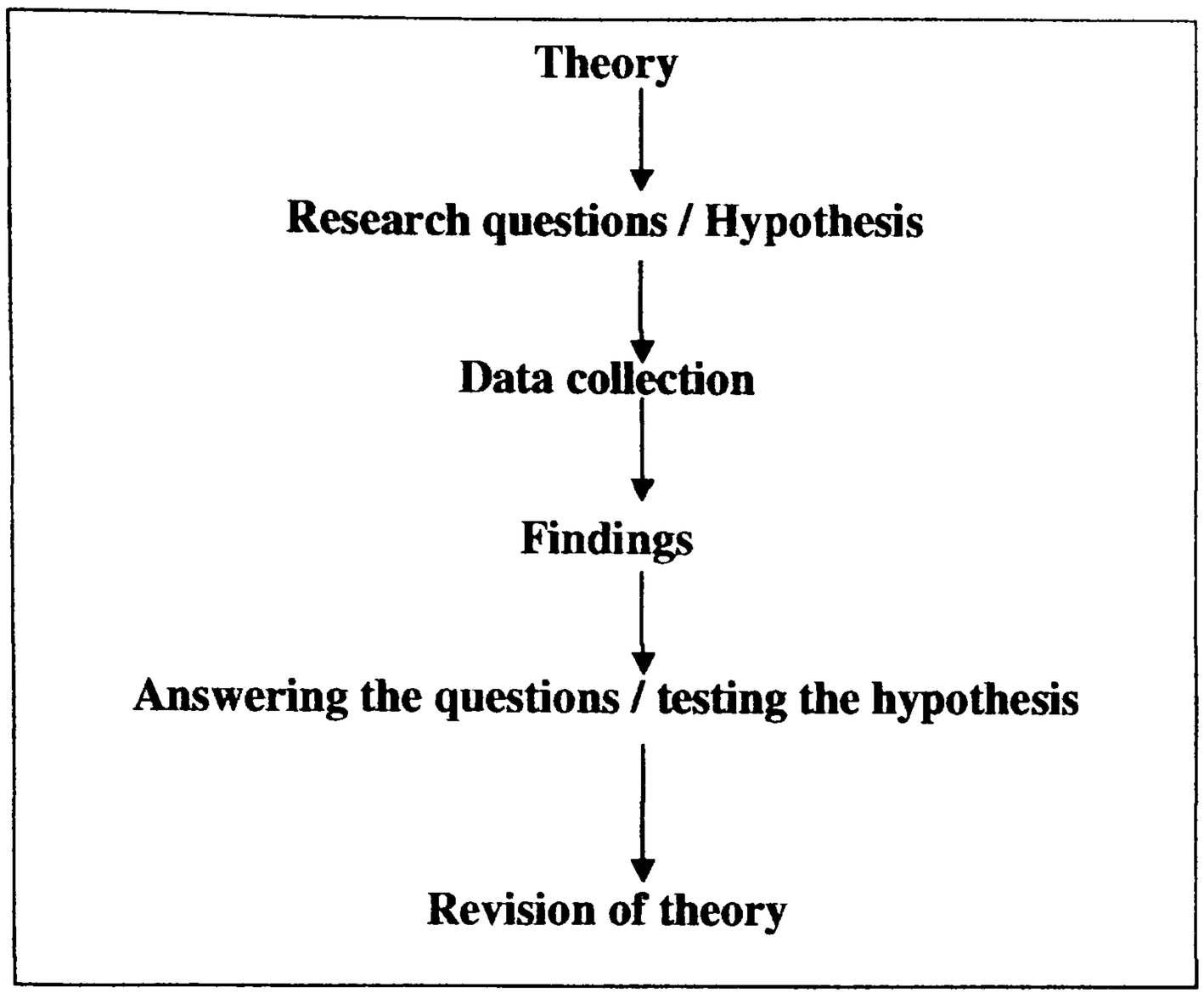


Figure 7.3: The steps of deductive research. Adapted from Bryman (2001).

(Grix, 2004); Sekaran (2003) mentioned that *Deduction* is the process by which we arrive at a reasoned conclusion by logical generalization of a known fact. Induction, on the other hand, is a process where we observe certain phenomena and on this basis arrive at conclusion. In other words, in induction we logically establish a general proposition based on observed facts.

According to Youssef (2007) "*these two methods of reasoning are two opposite extremes laid on a continuum. Inductive reasoning is more open-ended and exploratory, especially at the beginning. Deductive reasoning is narrower in nature and is concerned with testing or confirming hypothesis (es). Even though a particular study may look like it is purely deductive or purely inductive, most social research involves a combination of both inductive and deductive reasoning processes*".

Machina (1985); Bara & Bucciarelli (2000) argue that the ways of placing all arguments into two separate inductive and deductive categories will not be successful as the two paradigms share a similar set of procedures.

Based on this, this research will follow a more pluralistic (universal) approach.

Literature about management accounting, management accounting change, and target costing will be consulted, and Egypt (as a research setting) will be introduced. Institutional Economics and new institutional sociology will serve as hybrid theoretical frameworks within which this study will be conducted. These frameworks drew the boundaries within which the line of thought governing this study went through. Consecutively, research questions and hypotheses are drawn and tested.

6. Methodological foundations and Institutional Economics

"*Methodological choice involves selection among methods, which embody a variety of assumptions about the nature and construction of knowledge*" (Mohamed, 2004). According to Bryman (2004); Tantawi (2008) there exists two streams of the argument about quantitative vs. qualitative research. The epistemological point of view emphasizes the incompatibility between their respective epistemological and ontological principles. The technical point of view, on the other hand, concentrates on the strengths of data collection and analysis techniques associated with both techniques. Furthermore, the later view looks at both research strategies as compatible, desirable, and feasible.

Several steps underpin the methodological foundations of research and aim to decide the most suitable research methodology.

7. Data sources

According to Cooper & Schindler (1998); Sekaran (2003), there exist two sources of data... namely *Primary Data* and *Secondary Data*.

Primary data refers to information obtained firsthand by the researcher on the variables of interest for the specific purpose of the study. *Secondary data* refer to information gathered from sources already existing.

7.1 Primary data resources

7.1.1 Interviews

Structured interviews: it is the most rigorous and the least flexible in the way it is set up. Interviewees are asked predetermined questions in a specific order and the responses are logged (either by recording electronically or by note-taking). The same process is repeated with a number of other interviewees, and the results or findings can be compared with one another, categorized according to specific questions, and aggregated statistically. Usually, interviews are carried out by the researcher, face-to-face. However, the structured technique can be also carried out via e-mail or by telephone Kumar (1999).

The main advantages of structured interviews are to achieve a high degree of standardization or uniformity and ease of comparability. In addition, the researcher needs fewer interviewing skills than are necessary for the unstructured interviews. The major disadvantage of this type is missing of the opportunity of discovering important information due to the inflexible nature of this type of interviews.

Semi-structured and unstructured interviews: are one step down from the structured interviews. According to Sekaran (2003), the main purpose of the unstructured interview is to explore and probe into the several factors in the situation that might be central to the broad problem area. More clearly, the interviewer might have a number of questions in mind.

Questions that do not follow any specific or predetermined order that he/she wishes to ask the interviewees. This interview type allows a certain degree of flexibility and allows for the pursuit of unexpected lines of enquiry. This technique can be helpful at the very beginning of a research, as unstructured sessions can open up avenues of investigation, including informal discussions, previously unthought-of. However, the answers and data gathered from such sessions are not comparable, as the content of each interview is likely to be very different Grix (2004).

7.1.2 Focus Groups

A focus group consists typically of 8 to 10 members with a moderator leading the discussions on a particular topic, concept, or product. Members are generally chosen on the basis of their expertise in the topic on which information is sought.

Some examples of sources of primary data are individuals, focus groups, and panels of respondents specially set up by the researcher. The respondents' opinions may be sought on specific issues from time to time, or on some unobtrusive sources. The internet could also serve as a primary data source when questionnaires are administrated over it.

The focus sessions are aimed at obtaining respondents` impressions, interpretations, and opinions, as the member talk about the event, concept, product or service.

According to (Cooper and Schindler, 1998), Focus groups (having originated in Sociology) became widely used in market research in the 1980s and are used for more diverse research applications today. They go on to say that the output of a focus group session would be a list of ideas and behavioural observations with recommendations from the moderator. These, in turn,

are often used for later quantitative testing. Furthermore, in exploratory research, the qualitative data that focus groups produce may be used for enriching all levels of research questions and hypotheses and comparing the effectiveness of design options.

In order to assess the institutional factors that could affect the application of target costing –as a newer management accounting technique- in the Egyptian environment, the researcher conducted three separate focus groups within the period of one month. The goal of these groups was to come to a conclusion as to which factors were the most important ones. Each group consisted of ten professionals. The level within the respective organizations ranged from first level, to senior management. Age ranged from 28 to 53 years. 22 of the attendees were male and 8 were female. Sessions ranged from one to two hours.

The aim of the meeting was clearly explained in the beginning of the session and notes were taken by the researcher/moderator. Questions revolved around the main elements of management accounting techniques in general and target costing specifically. These focus groups led to the conclusion that the factors that would influence the application of management accounting methods/procedures/systems in the Egyptian environment could be gathered under the following groups[6]:

External stakeholders, Current management accounting, Management accounting tasks and perception of management accounting change, Coordination & teamwork, External factors, Training levels, Personal skills, The organizational culture, Informal/personal factors, The decision making processes, Environmental surroundings, and Current pricing methods.

Another outcome of the focus groups' discussions was the verbalization of the supporting research hypotheses. As soon as the main constructs were agreed upon, and towards the end of

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[6] Many more factors or elements were discussed, but never used. This is because they were individual opinions that did not gain group consensus. An example of these factors is the cost associated with consultant services, and the number of accountants suitable for the application of 'newer' modern management accounting techniques.

each session, a group of phrases was introduced to attendees. These phrases expressed the possible wording of the research supporting hypotheses. The agreed upon phrasing was then cross referenced between the three sessions held and the final outcome was utilised in the research[7].

7.1.3 Panels

Panels, like focus groups, are another source of primary information for research purpose. Whereas focus groups meet for a one time session, panels (of members) meet more than once. In cases where the effects of certain interventions or changes are to be studied over a period of time, panel studies are very useful.

In this study, the researcher did not have to go over any concepts or questions again. If a clarification was needed, a simple telephone call was made to obtain the respondent's input. This action happened only twice while the researcher was going over the outcome of the original meetings. In one instance, the attendee promised to elaborate on a certain point after checking with his/her management, and the other was when the researcher needed to clarify a certain attendee stand point being positive or negative.

7.2 Secondary data sources

According to Sekaran (2003); Grix (2004), secondary data are indispensable for most organizational researches. Secondary data refer to information gathered by someone other than the researcher conducting the study or research. Such data can be internal or external to the organization and accessed through the internet or perusal of recorded or published information. For example, secondary data can be used, among other things, for forecasting sales by constructing models based on past sales.

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[7] Phrases like "do you think that in Egypt, organizations would/would not adopt and apply newer management accounting techniques", and "Would the current management accounting techniques affect/not affect the application of target costing" were used .

There are several sources of secondary data including books, government publications of economic indicators, census data, statistical abstracts, databases and annual reports.

The advantage of seeking secondary data sources is saving in time and costs of acquiring information. However, secondary data as the sole source of information has the drawback of becoming obsolete, and not meeting the specific needs of the particular situation or setting.

Moreover, according to Schindler (1998), secondary sources can usually be found more quickly and cheaply than primary data. In this study, the main secondary sources of data were academic databases, books, academic periodicals, published PhD theses, the internet, and questionnaires previously administered by researchers. The previous questionnaires were used as a guide in building the survey used in this research[8].

8 Articulation of the central argument of the research

Most of the studies that the researcher reviewed investigated target costing -as a modern management accounting technique- from an application/non application point of view. They measured the level of utilization of the technique with no regard to the institutional elements that could affect this application. They broke down target costing to its main components and determined to which extent each component was applied and how successful the application was.

This study aims to answer the following main question:

"What are the institutional factors that could affect the applicability of target costing as a contemporary management accounting concept in the current Egyptian business environment?"

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[8] Thanks are due to Professor Shahid Ansari among other scholars that took the time to dig out their questionnaires and send them to the researcher.

As discussed in the theoretical framework chapter, institutions play a major role in shaping how organizations act and/or perform within their respective environments. Recent applications/methods/techniques have to go through "institutional scrutiny" in order to gain acceptance and be applied. Also, as discussed in the management accounting change section, change - management accounting change included - can be perceived as disruptive, hard, impossible, costly, impractical, and unfavourable. Opposition to change in Egypt is expected to be high and powerful. This issue has to be addressed in the tools used to test the applicability of the latest management accounting techniques.

8.1 Supporting research hypotheses

Also, through the focus group process and their results, respondents had an accord that the following hypotheses were most suitable to support the main research question, and that they were also suitable to be used as the basis for testing the relationships between constructs. The wording of the hypotheses was a collective effort amongst the focus groups attendees over the three meetings... these hypotheses are as follows:

H_1: "In Egypt, organizations either are not familiar with or would not apply Target Costing as an example of new management accounting techniques.

H_2: The organization's external stakeholders will influence the application of target costing (as a new management accounting technique) within the organization.

H_3: The current management accounting techniques will affect the application of target costing (as a new management accounting technique) within the organization.

H_4: Management accounting tasks and perception of management accounting change will have an effect on the application of target costing (as a new management accounting technique) within the organization.

H_5: Coordination & teamwork will influence the application of target costing (as a new management accounting technique) within the organization.

H_6: External factors surrounding the organization will affect the application of target costing (as a new management accounting technique) within the organization.

H_7: Training levels will influence the application of target costing (as a new management accounting technique) within the organization.

H_8: Personal skills are important in determining the success of the application of target costing (as a new management accounting technique) within the organization.

H_9: Informal/personal factors will affect the application of target costing (as a new management accounting technique) within the organization.

H_{10}: The decision making processes will affect the application of target costing (as a new management accounting technique) within the organization.

H_{11}: Environmental surroundings will have an effect on the application of target costing (as a new management accounting technique) within the organization.

H_{12}: The organizational culture will influence the application of target costing (as a new management accounting technique) within the organization.

H_{13}: Current pricing methods will have an effect on the application of target costing (as a new management accounting technique) within the organization.

9 Research design

The research theoretical framework is discussed in length in a separate chapter. The main theme is based on a hybrid theory combining "Old Institutional Economics" (OIE), and "New Institutional Sociology" (NIS) ideas and concepts.

The main train of thought underpinning the old institutional economics framework is the recognition that management accounting practices can both shape and be shaped by the institutions which govern organizational activity.

(Hamilton, 1932) used the term "**Institutions**" to portray "*A way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people*". As such, institutions can be regarded as imposing form and social coherence upon human activity, through the production and reproduction of settled habits of thought and action.

In other words, the institutional economics train of thought discusses why groups of people act the way they do, how these habits are formed, and how easy/rigid these habits are susceptible to change.

An organization functions in a dual society -internal and external. It abides to the institutions governing both these environments and is affected by whatever prevailing rules and routines. Hodgson (1993b)

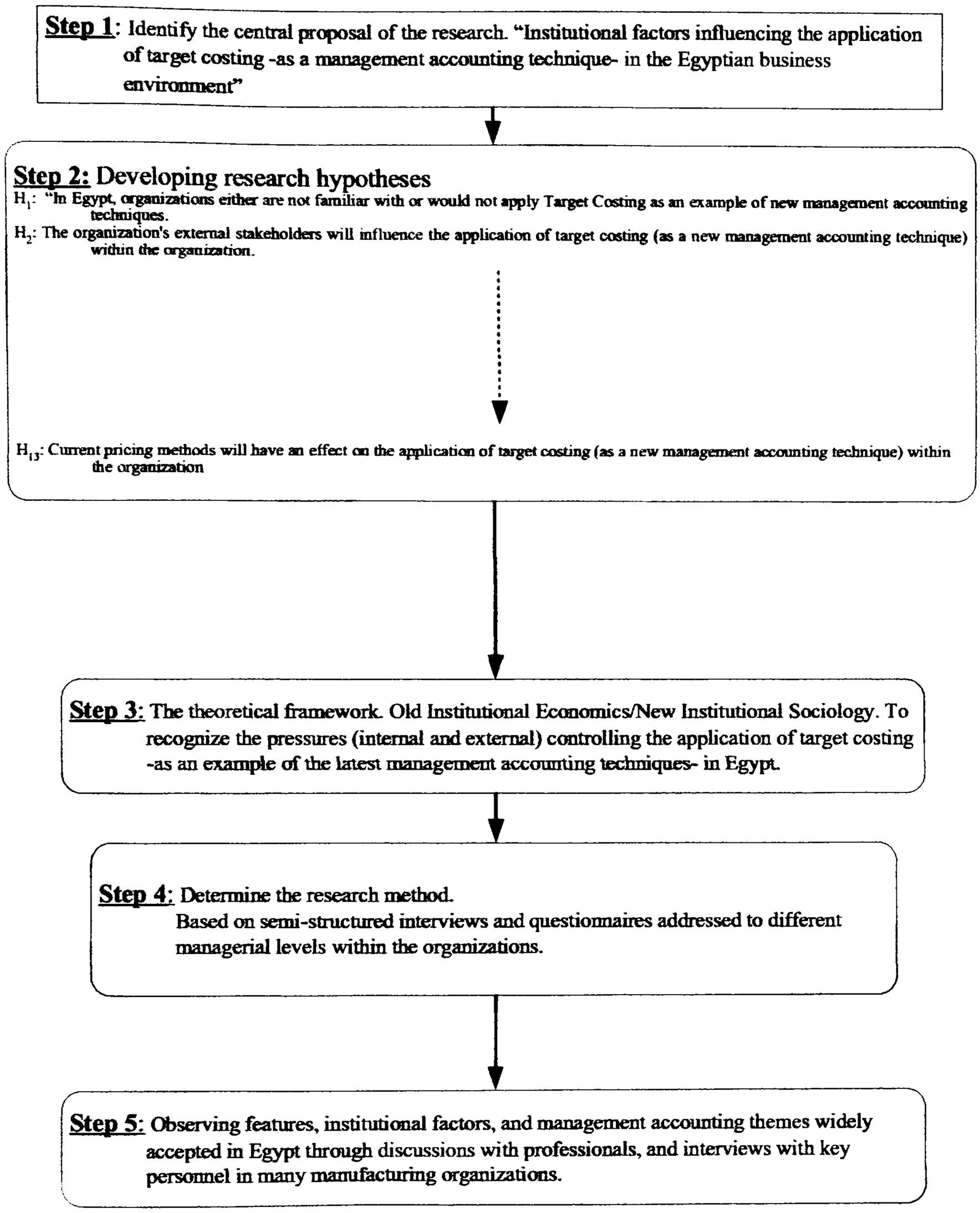
With its high level of human intervention, the applicability of management accounting ideas, methods, and techniques is affected by the institutions reigning over the societies they are applied within. To be able to switch between these techniques, presumably improving

performance, cutting costs, and bettering quality, an organization would face a great deal of resistance to change (Johnson and Kaplan, 1991, Dent, 1991, Hiromoto, 1991, Scapens, 1994, Partanen, 1997, Burns and Scapens, 2000, Burns and J.Vaivio, 2001, Burns and Yazdifar, 2001).

From a slightly different point of view, Management accounting techniques tend to be shaped in more developed industrial environments – i.e. The United States of America, Japan, and The United Kingdom. When these techniques gain wide acceptance and prove to be beneficial, they are transmitted to other, developing industrial environments i.e. Egypt, China. This transition is carried away by the growing number of multinational organizations doing business in these environments. Also, the ever increasing number of trade treaties and the market globalization tend to act as a catalyst to the spreading of these techniques[9]. For this transition to take place smoothly and with little friction, and in order for these techniques to achieve the required results, organizations have to take into consideration the institutions already in place in the destination environments, and the possible amendments to the new techniques that might be necessary in order for the introduction to be successful.(DiMaggio and Powell, 1983, Yakhou and Dorweiler, 1995, Swenson, 1995, Baydoun et al., 1997, Kloot, 1997, Atkinson et al., 1997, Warwick et al., 1997, Shields, 1997, Suwongwarn, 1998, Adler et al., 2000a, Scapens, 2006).

[9] Those are thoroughly discussed in the chapter about Egypt

Figure 7.4: illustrates the methodological foundations of the research:



Format adapted from: Mohamed 2004

9.1 The population

Population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. Sekaran (2003)

New Burg El Arab City is one of the new cities whose establishment is mandated in the national plan of the Arab Republic of Egypt for the establishment of new urban communities, with the aim of absorbing the current and future rise in population in the city of Alexandria and of putting an end to the use of agricultural land for building. The city is surrounded on all sides by a green belt with a surface area of 18,000 feddans[10]. As a residential-industrial city with a full range of utilities and services, New Burg El Arab is regarded as a major urban centre. The president performed the formal inauguration of the city in November 1988.[11]

The city has a total surface area of 200 square kilometres, of which the built area occupies 102 square kilometres. It is comprised of 10 residential districts and five industrial districts, each residential district containing eight to nine neighbourhoods. The central hub of the city, in which the main services are concentrated, is situated in the middle[12].

Residential Area: Equipment of the First Residential District with utilities is complete, as is the first stage of the Third Residential District. Equipment of the Second Residential District, the rest of the Third, and the Fourth Residential District are underway. The construction of 560 middle-income housing units in the Third Residential District is underway. 8,241 model housing units (above-average, low-cost, and economic) have been completed and most have been handed over to their owners. The units' hand-over proceeds according to phases and a defined timetable. Spending on housing projects to date amounted to some 164 million Egyptian Pounds.

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[10] An area of land slightly larger than an acre
[11] **http://www.alextp.gov.eg/borg.html**
[12] **http://www.alextp.gov.eg/borgplane.html**

Industrial Zone: The industrial zone of the city has been located to its east and south so that it will have no environmental impact on the city. The zone consists of 22 square kilometers currently distributed among four districts. Two further districts (extensions of the Fourth and Fifth industrial districts) are planned in addition to areas set aside for workshops and small industries. There is also an Industrial Zone Services Centre, which includes a training centre. Factories in production provide job opportunities for approximately 21,000 workers

Public services : New urban communities authority invested 86 million Egyptian pounds in establishment of 48 service buildings in addition to 27 nongovernmental service buildings The most popular projects at Borg el Arab are Mubarak academy for scientific research, Lebanon University, Borg el Arab air port and The free zone. The Service activities occupy 13,400 feddans in several fields like education, health, religion and culture[13].

Table 7.2: shows in more detail the public services at Borg el Arab[14]

Education	1 education district administration 7 kindergartens 2 basic schools 1 experimental school (languages) 1 general secondary school 1 vocational training center 2 Azhar elementary, preparatory, and secondary schools and institutes 1 Mubarak City for Scientific Research
Religion:	4 mosques and a religious endowments administration
Security and Police	1 district police station 1 utilities police 1 State Security Investigations department 2 main fire stations 1 conscription office 1 Border Guards office 6 fire trucks 15,000 cubic meter civil defence water reservoir
Health	1 health district administration 1 150-bed general hospital

[13] (http://www.urban-comm.gov.eg/borg_service.asp)

[14] **Source: (http://www.alextp.gov.eg/borgpub.html)**

	1 medical centre belonging to the Ministry of Health 7 private pharmacies 1 full-service health insurance clinic 1 private medical centre 1 private medical analysis labouratory 1 public hospital under construction (New Burg El Arab City Hospital) 1 X-ray centre The equipment of a teaching hospital belonging to the University of Alexandria furni with analysis labouratories and X-ray departments, etc. is underway.
Culture	1 integrated cultural centre with cinema 1 model sports-social-cultural youth centre
Provisioning	1 rationing office 3 automated bakeries 1 Buta-gaz depot 1 consumers' cooperative 10 butchers' shops 1 main commercial centre (under construction) 6 meat, fish, and poultry outlets 2 neighbourhood markets 20 vegetable and fruit shops 1 market for itinerant hawkers 851 shops in all fields have been constructed
Communications	30,000-line telephone exchange Goods and passenger services 1 bus sub-station Collective taxi stations
Ministry of Justice	1 public notary and registration office 1 survey office
Social Affairs	1 social affairs office 1 insurance and pensions office
Bank	11 banks providing a full range of banking services
Miscellaneous:	1 commercial registry 1 industrial and trades safety office 1 youth hostel 3 insurance company offices 2 small-scale industries complexes (1 under construction) 1 administrative building in the First District belonging to the city government 1 semi-automated butchery under construction Numerous general service offices Traffic unit Cemetery area

New Burg El Arab is regarded as a major industrial city in Egypt. Industrial activities occupy 5,500 acres. There are 444 factories with invested capital 3.2 Billion Egyptian pounds providing approximately 32,900 job opportunities, in addition to 154 factories under construction with invested capital of 0.34 billion Egyptian pounds providing approximately

6,100 job opportunities. These factories operate in several fields of industry. The following table includes the number of companies in the most popular activities[15]

Industrial activity	Number of companies
Agriculture activities	5
Chemical industries	79
Consultancy and services	2
Contracting and realty	9
Engineering equipment	34
Food and beverages	59
Wood and furniture	19
Investment and insurance	2
Metallurgical industries	32
Mining and building materials	11
Paper and publishing	25
Pharmaceutical industries	3
Textiles and garments	44
Trade and distribution	30
Transport and communication network	1

Table 7.3: companies / industrial activities. Source: Dalil Al Ahram 2004

The City Development Agency advertises the sale of land for industrial and residential projects. Investors wishing to reserve plots of land for industrial projects present a request to the Agency's Realty Affairs Administration. The successful investor is granted a period of three years to complete the set up of the project for the agreed purpose. Failing to do so, the allocation is cancelled. Investors enjoy all custom and tax exemptions permitted under Law 91/1983 relating to customs exemptions. Owners of industrial projects enjoy priority in reserving housing units and in reserving plots allocated for housing in the city[16].

[15] (**http://www.urban-comm.gov.eg/borg_econo.asp**)
[16] http://www.alextp.gov.eg/borginv.html

9.2 Sampling

According to Sekaran (2003), a sample is a subset of the population. It comprises some members selected from it. By studying the sample, the researcher should be able to draw conclusions that would be generalizable to the population of interest.

The reasons for using a sample, rather than collecting data from the entire population, are self-evident. In research investigations involving several hundreds and even thousands of elements, it would be practically impossible to collect data from, test, or examine every element. Even if it were possible, it would be prohibitive in terms of time, cost, and other human resources. Study of a sample rather than the entire population is also sometimes likely to produce more reliable results.

9.2.1 Sampling techniques

Two major types of sampling designs exist according to (Cooper and Schindler, 1998, Sekaran, 2003), *probability* and *non-probability* sampling. In probability sampling, the elements in the population have some known chance or probability of being selected as sample subjects. In non-probability sampling, the elements do not have a known or predetermined chance of being selected as subjects. Probability sampling designs are used when the representativeness of the sample is of importance in the interests of wider generalizability. When time or other factors, rather than generalizability, become critical, non-probability sampling is generally used.

9.2.1.1 Probability sampling:

Simple random sampling: in this type every element in the population has a known and equal chance of being selected as a subject. This sampling design has the *least bias* and offers the most generalizability. However, this sampling process could become weighty and expensive; in addition an entirely updated listing of the population may not always be available.

Complex probability sampling: as an alternative to the simple random sampling design, several complex probability sampling (restricted probability) designs can be used. These probability sampling procedures offer a viable, and sometimes more efficient alternative to the unrestricted design. Efficiency is improved in that more information can be obtained for a given sample size using some of the complex probability sampling procedures than the simple random sampling design. The five most common complex probability sampling designs are: Systematic sampling, Stratified random sampling, Cluster sampling, Area sampling, and Double sampling.

The systematic sampling design involves drawing every n^{th} element in the population starting with a randomly chosen element between 1 and n.

While sampling helps to estimate population parameters, there may be identifiable subgroups of elements within the population that may be expected to have different parameters on a variable of interest to the researcher. *Stratified random sampling*, as its name implies, involves a process of stratification of segregation, followed by random selection of subjects from each stratum. The population is first divided into mutually exclusive groups that are relevant, appropriate and meaningful in the context of the research. Then, a simple random sample is selected from each stratum.

Group or chunks of elements that, ideally, would have heterogeneity among the members within each group are chosen for study in *cluster sampling*. This is in contrast to choosing some elements from the population as in simple random sampling, or stratifying and then choosing members from the strata as in stratified random sampling, or choosing every n^{th} element in the population as in systematic sampling. When several groups with intra group heterogeneity and intergroup homogeneity are found, then a random sampling of the clusters or

groups can ideally be administered, and information would be gathered from each of the members in the randomly chosen clusters.

The unit costs of cluster sampling are much lower than those of other probability sampling designs of simple or stratified random sampling or systematic sampling. However, cluster sampling exposes itself to greater biases and is the least generalizable of all probability sampling designs because the conditions of intra-cluster heterogeneity and inter-cluster homogeneity are often not met.

The *area sampling* design constitutes geographical clusters. That is, when the research pertains to populations within identifiable geographical areas (such as countries, cities, blocks, or particular boundaries within a locality). Thus, area sampling is a form of cluster sampling within an area.

Area sampling is less expensive than most other probability sampling designs, and it is not dependent on a population frame. A city map showing the blocks of the city would be adequate information to allow a researcher to take a sample of the blocks and obtain data from the residents therein.

A sampling design where initially a sample is used in a study to collect some preliminary information of interest, and later a sub-sample of this primary sample is used to examine the matter in more details, is called *double sampling*.

9.2.1.2 Non-probability sampling

According to Sekaran (2003), there exists two main types of non-probability sampling, namely, *Convenience sampling* and *Purposive sampling*. Convenience sampling refers to the collection of information from members of the population who are conveniently available to provide it.

Purposive/Judgment sampling involves the choice of subjects who are most advantageously placed or in the best position to provide the information required. It is the only viable sampling method for obtaining the type of information that is required from very specific pockets of people who alone possess the needed facts and can give the information sought.

10 Research method / Strategy

(Soliman, 2003, Yin, 1994) said that the "*Research strategy should be chosen as a function of the research situation. Although each strategy has its own characteristics, there exists overlapping areas that bring complexity to the process of strategy selection. In order to avoid gross misfits between the desired outcome and the chosen strategy, the type of question posed; control over actual behavioural elements; and the degree of focus on historical or contemporary events, are the conditions that should provide the grounds for strategy choice.*"

Table 7.4: illustrates the association between the research strategies that are most common and the three conditions mentioned above.

Strategy	**Form of research question**	**Requires control behavioural events**	**Focus on contempo events**
Experiment	How, Why	Yes	Yes
Survey	Who, What, Where, How m How much	No	Yes
Archival analysis	How, Why	No	Yes / No
History	How, Why	No	No
Case study	How, Why	No	Yes

Adapted from: Yin (1994)

According to (Amaratunga et al., 2002), the researcher using quantitative methods looks for causal assertion, prediction, and generalization of findings. (Soliman, 2003) mentioned that

"*quantitative research uses methods adopted from the physical sciences that are designed to ensure objectivity, generalizability, and most importantly, reliability*".

(Weerd-Nederhof, 2001) stated that quantitative techniques cover the unbiased and random choice of participants from among the population under study, the standard questionnaire they receive, and, the statistical methods used to investigate the hypotheses involving the relationship between variables being tested. Weerd-Nederhoh goes on to state that in quantitative research, the researcher is considered external to the actual research and results are believed to be replicable no matter who conducts the research. (Hyde, 2000) said that the strengths of the quantitative concept are apparent as its methods yield quantifiable and reliable data that is usually generalizable to larger populations. Another advantage of questionnaires (as a quantitative method) is that a greater number of questions can be distributed to a larger number of respondents. This vastness in range can not be achieved economically and practically by an alternate method. Moreover, questionnaires allow respondents enough time to answer the questions. Lastly, (Selltiz et al., 1965) argued that the questionnaire is useful for a researcher who seeks information about what he/she knows, believes, and/or expects.

Based on the different arguments mentioned above, this research used a questionnaire in order to guarantee the researcher's unbiased administration, the ability to test the relationship between variables, and the ability to generalise the findings to different industrial zones in Egypt.

From a different point of view, (Lofland and Lofland, 1984) referred to qualitative research as "*The data collection techniques of participant observation and/or intensive interviewing and data analysis techniques that are non-quantitative.*" In the most basic sense qualitative

research is about observing events in their natural setting and reporting them in a systematic way.

According to (Atkinson and Shaffir, 1998), "*Qualitative research, rooted in phenomenological principles, is most naturally situated within the theoretical framework of symbolic interaction, which is associated with phenomenology's principles*". A basic position of this orientation is that social meanings, which guide human behaviour, do not inhere in activities, but are conferred on social events by interacting individuals who interpret what is happening -from the social context in which these events occur. According to (Blumer, 1969), symbolic interaction rests upon three major premises:

1. People act toward things based on their perception of these things;

2. The meanings/perceptions are social products that are derived from, and arise out of, social interaction; and

3. Social actors attach meanings to situations, to others, and to themselves through a process of interpretation.

A combined quantitative/qualitative research method is the base upon which the research was built. The main objective of the research is to illustrate the main institutional factors that could either promote or hinder the application of modern management accounting techniques/methods in the Egyptian business environment.

10.1 Multiple methods/strategies

There have been an increasing number of scholars advocating the use of multiple methods, theories, and philosophical approaches to social research, Gioia & Pitre (1990), Mingers & Brocklesby (1997), Tashakkori & Teddlie (1998), and Youssef (2007). They claim that a single

research perspective restricts, deforms, or even makes it difficult to see the relationship between information systems, people, organizations, and societies.

According to Tantawi (2008), "*mixed methods investigations involve integrating quantitative and qualitative data collection and analysis in a single study or program of inquiry. This form of research is more than simply collecting both quantitative and qualitative data; it indicates that data will be integrated, related, or mixed at some stage of the research process. The underlying logic of mixing is that neither quantitative nor qualitative methods are sufficient in themselves to capture the trends and details of the situation. When used in combination, both quantitative and qualitative data yield a more complete analysis, and complement each other*"

Hammersley (1996), as referenced in Tantawi (2008), offered three approaches to the 'multi-strategy' (using more than one method) research. ***Triangulation*** is the use of quantitative research to support qualitative research results and vice versa. In the literature on social science 'theoretical triangulation' is a term that describes the use of multiple paradigms in the study of the same phenomena (Jick, 1979, Campbell and Fiske, 1959). ***Facilitation***, when one research strategy is used to assist other research using the other research strategy. ***Complementarity***, is applied when the two research strategies are employed with the goal to 'fit together' different aspects of an enquiry.

Stringfield & Teddlie (1990); Greene & Caracelli (1997); Milliken (2001); Bryman (2004); and Tantawi (2008), stressed that the mixture of different types of measures can strengthen a study and produce better value. The qualitative research does extremely well in illustrating the "tale', explaining complex social phenomena, and assisting researchers develop themes or constructs using participants' points of view. Based on the quantitative approach, researchers will have better capabilities in dealing with larger quantities of data, and in reaching

generalizations of the results. Furthermore, Jick (1970) argued that there were limitations associated with all methods of enquiry, and therefore, the use of multiple methods can offset the effect of these limitations.

Multi-theoretical perspectives to research permit a wider and richer understanding of organizational phenomena than a singular theoretical perspective. This claim, by many researchers, advocates the use of multiple theories or theoretical triangulation to take advantage of their complementariness and build a more holistic analysis.

Furthermore, the complexity of accounting practices cannot be fully explained by one single theory. (Feyerabend, 1990, Feyerabend, 1978, Lakatos, 1976) suggested that there is some virtue in each individual theory and therefore no theories can have a monopoly on explanation. Collectively, they add to an understanding that accounting is indeed a paradoxical phenomenon (Morgan, 1988, Ardill, 2000). It can be safely argued that the use of theoretical triangulation means that the weaknesses in each single theory will be complemented by the counter-balancing strengths of another.

(Atkinson et al., 1997) (p. 89) said that "*An important observation that emerged from our deliberations is the value of using multiple research methods to address the same research question. This is good news (especially for doctoral students) because one need not go far to find inspiration for future research. Accounting research questions pursued using one research method can and should provide stimulus for research using another method. For instance, a controlled experiment can be used to distinguish between competing economics based and psychology-based explanations for observed behaviour. In addition, cross-disciplinary research projects can expand the knowledge base in management accounting. For example, the psychology of group decision making may be applicable to research inquiries in areas such*

as target costing. Thus, opportunities to expand our understanding of management accounting phenomena are created when researchers use the synergy that exists among research methods and across disciplines to study complementary issues".

In light of the previous arguments, to complement the findings of the questionnaire, and to add more depth to the research, semi structured interviews, as a qualitative method, were conducted. This way, the researcher ensured that any 'unexpressed' answers, feelings, or opinions in the questionnaire were covered, and that any ambiguity was clarified.

The duality in the research method is justified because of the need to evade the shortcomings and/or defects embedded in exclusively using surveys or using interviews.

The views of different managerial levels in many organizations were gathered. These views mainly were collected through semi-structured interviews followed by questionnaires directed to these levels.

10.2 Reasons for choosing questionnaires and interviews

One of the advantages of questionnaires (as a quantitative method) is that a greater number of questions can be distributed to a larger number of respondents. This vastness in range can not be achieved economically and practically by an alternate method. Moreover, questionnaires allow respondents enough time to answer the questions. Lastly, (Selltiz et al., 1965) argued that the questionnaire is useful for a researcher who seeks information about what he/she knows, believes, and/or expects.

11 Questionnaire design

As is the case with research related to human behaviour, and the factors affecting it, there is no one universal scale that can be used to measure what institutional factors could affect the use or refusal to use a certain management accounting technique.

The survey used evolved from previous surveys investigating management accounting change, newer management accounting applications, target costing, readings in professional literature along with informal interviews with professionals.

The questionnaire was designed to collect data about the following major themes derived from the literature about target costing, institutional economics, and new institutional sociology.

The environment surrounding organizations, state of competition, teamwork and internal coordination, management accounting techniques/methods (what are they, perception of usefulness, application, factors influencing application), drivers of management accounting change, How management accountants are regarded, coordination with other parts of the value chain, and values, habits and routines.

The first section of the questionnaire was designed to collect demographic data about the respondents. The aim of that part is to construct a picture or a profile about the respondents.

The second section is concerned about the business as a whole i.e. industry group, production methods.

The final -and major- part of the survey, attempts to measure the main constructs under investigation.

The research method was based on the following steps:

a- Pre-administered questionnaires

Questionnaires previously administered were inspected keeping in mind the environment and the settings they were administered within.

Many researchers that investigated target costing -under different contexts- were contacted and asked to provide the researcher with the questionnaires they used in their studies. These surveys were then combined and thoroughly inspected to define the parts relevant to the issue at hand. Using pre administered questionnaires (as a basis for the survey used) provided some confidence in their reliability and validity (keeping in mind that reliability and validity of the new survey had to be measured).

b- Focus groups

As discussed in a previous part of this chapter, focus groups were held in preparation to come up with the final version of the questionnaire. The outcome of these groups was very beneficial in determining the suitable length of the questionnaire.

Once the questionnaire was almost ready, it was translated to Arabic. This was done by the researcher. The Arabic version was then re-translated to English by two professional language experts in order to ascertain that the two versions (Arabic & English) were leading the same way, and that there were no language differences leading to flaws in how respondents will understand the survey. A note worth making here is that the experts being English experts needed the researcher's aid in translating terminology such as activity based costing, target costing, and just in time. That was the only intervention the researcher had with the re-translation process.

Following this step, both versions of the questionnaire were piloted. The goal of this process was to have a feel for length, wording, and clarity. Colleagues and business acquaintances generously took the time to fill the questionnaire and critically evaluate it. Finally, slightly adjusted, the final version of the questionnaire was developed and distributed to the sample members.

A critical characteristic must be mentioned at this point to clarify the questionnaire distribution process that the researcher followed.

The mechanics of the Egyptian environment -business environment especially- are different than its counterpart in western societies. Personal relations, next of kinship, and informal connections play a great role in how things get accomplished in the Egyptian environment.

The researcher used his wide base of professional acquaintances in private/public businesses and banks, previous students, in addition to his colleagues at his academic institution. Each member of these diverse groups was handed a group of questionnaires that he/she was responsible of getting back to the researcher. Also, the questionnaire was sent via electronic mail –which is currently acquiring wide acceptance as a method of communication within the business world in Egypt- to several contacts that in turn forwarded it -be it the Arabic or the English version- to prospective respondents. After receiving the responses, contacts then returned the filled questionnaire booklets to the researcher.

Another issue concerns questions 15 and 16 of the survey. After the pilot part was administered, most respondents expressed their concern that there was a duplicate question. They specifically pointed out, that questions 15 and 16 were the same. Question 15 addressed the business unit, while question 16 addressed the corporation or the organization. That was intended to measure two different levels of cultural influence on several issues. While distributing the main survey, the researcher made sure that his contacts explained the difference between these questions, and that there was no duplication. Furthermore, in the email text body, for electronic respondents, the researcher emphasized this issue. The response to the main study showed a higher understanding of the questions, and a lower percentage of omission.

Which questions address which parts

Several factors/issues were identified as critical or important both in the literature and the theoretical parts of the research.

In this section, the researcher will briefly illustrate these issues and point out which parts of the questionnaire addressed which of these factors.

Team work

As previously mentioned in the literature review section, target costing will only work if efforts from the marketing, design, manufacturing, purchasing/suppliers, sales, and finance will work together to achieve the targeted cost.

The questions that addressed the issue of teamwork were 3 (a, b, c, d, h, i, j, k, l, m, n), 15 (d, g), 16 (d, g), and 18 (a, b, c, e, f).

Competition, customer service & market data gathering and analysis

The current research in business suggests that competition levels are increasing. The current status of the business world, and the cut-throat rivalry between competing organizations dictated that new market-sensitive methods be devised. Target costing is a technique dictating that an organization has to make certain the project/product is feasible, and the market penetration would be successful.

Also, as the customer is the main focus of the method, and customer satisfaction and loyalty are the goals, several questions tested customer-related issues.

The questions that addressed competition and customer issues were 5, 6, 7, 11, 13, 17 (a, b, c, d, e, f, g, h, I, j, k, l), and 20.

Product development

The faster the product development period (lead time), the faster the product introduction into the market will be, and the higher the market share (Goldratt, 1997, Goldratt, 1986, Porter, 1980).

This matter is obvious in the electronics and computing business. The rate of innovation and introduction of new products is becoming increasingly shorter, and customer demands are increasing.

The questions that addressed product development are 2, 8, 9, 13 (c, d, e, f), 15 (e), 16 (e), and 17 (m).

Coordination with value chain members (suppliers and distributors)

As previously discussed in the teamwork section, and in the target costing section, it is imperative to have healthy communication channels between the organization and the other members of its value chain (Schmelze et al., 1996, Soliman, 2004, Swenson et al., 2003).

The questions that addressed Value Chain coordination were 18 (d), and 19.

Habits, routines & rules

The Rules, habits, and routines governing organizations, play a deciding role in determining the acceptance and applicability of newer techniques or methods (Burns and Scapens, 2000, Hamilton, 1932, Jeppeson, 1991, Johansson, 2002, Scapens, 2006, Scott, 2001).

The questions that addressed Institutions were 3 (e, f, g, o), 15 (a, b, c, f), 16 (a, b, c, f), and 17 (n).

Management accounting applications

The methods used –within the organizations- to deal with management accounting issues were tested for statistical reasons.

These were addressed in questions 10, 12, 14, and 21.

Demographics

Many demographical questions were also asked for statistical reasons. The researcher hopped that the analysis of this data would lead to further research especially in the Egyptian business environment.

12 Conclusion

In this chapter, the researcher discussed the various stages this research went through. Research in general was discussed, and then the method used to arrive at the research constructs and hypotheses.

The use of multi methodologies was introduced and justified. Following that, the construction of the research instrument was explained.

At the end, limitations of the research were briefly mentioned.

The next chapter is concerned with the statistical part of the research. It will discuss the statistical process that the research went through.

Chapter 8

The Statistical Analysis

1 Introduction

The goal of this chapter is to illustrate the statistical steps followed in analyzing the data gathered during the empirical part of the research.

This chapter starts by briefly explaining the sources of the variables/constructs used in the data collection phase of this research. It goes on to measure the reliability of the data collected in order to determine the stability and consistency of the measures.

The researcher had to differentiate between two types of data -normal/not normal- in order to elect the suitable statistical tests to be applied.

The statistical tests will, then, be administered, and results extracted. Each section will be followed by a brief summary illustrating the findings.

2 Quantitative analysis (the questionnaire)

2.1 Research constructs/factors

As mentioned before in the methodology chapter, most of the studies that the researcher reviewed investigated target costing from an application/non application point of view. They measured the level of utilization of the technique with little regard -if any- to the institutional elements that could affect this application. They broke down target costing to its main components and determined to which extent each component was applied and how successful the application was.

In order to assess the institutional factors that could affect the application of target costing –as a newer management accounting technique- in the Egyptian environment, the researcher conducted three separate focus groups within the period of one month. The goal of these groups was to come to a decision as to which factors were the most important ones. Each group consisted of ten professionals. The level within the respective

organizations ranged from first level, to senior management. Age ranged from 28 to 53 years. 22 of the attendees were male and 8 were female. Sessions ranged from one hour to ninety minutes.

The aim of the meeting was clearly explained in the beginning of the session and notes were taken by the researcher. Questions revolved around the main elements of target costing and management accounting techniques in general. These focus groups led to the conclusion that the variables mentioned in this section had the most influence on the application of management accounting methods/procedures/systems in the Egyptian environment.

In addition to the focus groups' outcome, the researcher identified factors/variables/constructs -from the management accounting, management accounting change, and institutional economics literature- that could influence the application of Target Costing -as a newer management accounting technique- in the Egyptian environment (as an example of a developing economy).

The combined results of both the focus groups and literature led to the following variables/factors/constructs:

External stakeholders

Current management accounting

Management accounting tasks and perception of management accounting change

Coordination & teamwork

External factors

Training levels

Personal skills

Informal/personal factors

The decision making processes

Environmental surroundings

Current pricing methods

The organizational culture

Non-usage of target costing (reasons).

2.2 The sample

752 questionnaires were distributed to various manufacturing businesses in the city. The target respondents were owners, board members, management accountants, and managers of industrial/production companies.

Respondents were given a choice between Arabic and English versions of the questionnaire. Also, the first page contained the researcher's phone number in case they needed any clarifications in addition to the glossary attached at the end.

The questionnaire was distributed both by hand and electronically as discussed in the previous chapter. Responses were collected, and handed in to the researcher where they were inspected, and entered into SPSS.

276 questionnaires [36.7%] were returned or collected, of which 160 [21.2%] were usable. 116 respondents did not fully complete the questionnaire. The returned questionnaires were entered in a log to keep track of the respondents. Reasons for non completion revolved mainly around lack of time.

Control for non-response

According to Cooper & Shindler (1998), non-response error occurs when the researcher can not locate the person whom he/she is supposed to study, or when he/she is not successful in encouraging the person to participate. In this research, unusable questionnaires were considered as if they were not reached, and therefore, were contacted again following the response log.

Furthermore, to check and control for non-response bias, Non-respondents were approached again, and 77 more questionnaires were collected. During this process,

questions about the reason/s why questionnaires were not initially filled were asked. Reasons for non response varied between "no available time", "I forgot", "did not see any benefit coming from filling the survey", and "was afraid that my answers might be reported to higher management" (even though respondents were guaranteed a very high level of confidentiality before the survey was distributed).

This additional sample was analyzed independently, in order to see if results were similar/comparable with the initial sample's results. When the additional sample was tested, overall results of the Cronbach Alpha test showed a .700 level of reliability.

To guarantee the **independence** of observations, whenever more than one respondent was approached to fill the questionnaire in the same organization, the research team made sure that the questionnaires were filled independently. It is observed that not more than three respondents filled the survey in any one organization.

2.2.1 Reliability Analysis

(Babbie and Halley, 1995) referred to reliability as the ability to trust the answers that people give us – even when their misstatements are honest.

(Sekaran, 2003) defined the reliability of a measure as "an indicator of the extent to which it is without bias (error free) and hence ensures consistent measurement across time and across the various items in the instrument". In other words, the reliability of a measure is an indication of the stability and consistency with which the instrument measures the concept and helps to assess "the goodness" of a measure.

According to Schindler (1998), "Reliability refers to the property of a measurement instrument that causes it to give similar results for similar inputs. For example, consider the produce scales at grocery stores. At a given store, each of these scales was probably

manufactured at the same factory. You would hope that the factory is reliable - that every scale produced at that factory would register the same weight (within a small margin of error) for the same head of lettuce.

It is important to note that reliability is not just a property of an individual produce scale. When buying groceries, you would expect the particular scale you use to be reliable and to record approximately the same weight when the same item is weighed a second time. However, the reliability of that particular scale is only of immediate importance to the customers using it, while the grocery store is concerned about all of the scales in the store, and the manufacturer is concerned about every scale produced at the factory. The deeper issue here is the reliability of the underlying process of scale manufacturing. If that process is reliable, then the manufacturer can be confident that the product is reliable. (Of course, chance error in the manufacturing process will cause a few individual scales to malfunction)".

There is a wide range of reliability tests offered by SPSS. Of these we mention Alpha, Split-Half, Guttman, Parallel, and Strict Parallel. The researcher chose to use Alpha as a widely employed test of reliability in social sciences. Cronbach's Alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach's Alpha is computed in terms of the average inter-correlations among the items measuring the concept. The closer Cronbach's Alpha is to (1), the higher the reliability of the instrument. Generally, reliability values of .6 and higher are considered acceptable (Sekaran, 2003).

When the questionnaire was tested, overall results of the Cronbach's Alpha showed a .783 level of reliability. Individual constructs' reliability is illustrated in table (8.1)

Variable	Questions	Reliability
Not familiar with and/or would not apply new Target Costing	197	One question. Not feasible to calculate reliability.
External stakeholders	12, 130-135, 137, 138, 139, 140, 141, 142, 144	.701
Current Management Accounting techniques	21, 22, 24-29, 31-51, 53, 54	.524
Management Accounting tasks / change	55-85, 145, 150, 178, 188, 190	.759
Coordination & Teamwork	52, 136, 146, 157, 158, 161, 163, 174, 176, 187	.664
External factors	8-11, 13-20, 117-129, 153-155, 181-184	.613
Training	30, 176	Very few questions, not feasible to calculate reliability.
Personal skills	86-102	.620
Informal personal factors	143, 147, 148, 151, 152, 156, 159, 166, 168, 169, 170, 177, 179, 180, 185, 186, 189	.636
Decision making	23, 160, 162, 164, 165, 171	.691
Environmental surroundings	110-116	.705
Organizational culture	103-109, 167, 172, 173	.696
Pricing method	191-196	.603
Non usage of target costing	198-214	.618

Table 8.1: Individual constructs' reliability

As shown in the table, individual reliabilities are all above .60 except current management accounting techniques (.524).

2.2.2 Sample demographics

Demographic facts about the sample are presented in this section.

Respondents' age: Ages varied from 25 to 60 years old. As shown in table (8.2), 51.5% of respondents were between the ages of 36 – 45. The average age for a college graduate in Egypt is 22 years and the retirement age is 60 years.

Respondent Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 25	17	7.2	7.2	7.2
	25-35	54	22.8	22.8	30.0
	36-45	122	51.5	51.5	81.4
	46-55	40	16.9	16.9	98.3
	56-60	4	1.7	1.7	100.0
	Total	237	100.0	100.0	

Respondents' gender: Table 8.3 shows that 86.1% of respondents were males, and 13.9% were females.

Respondent Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	204	86.1	86.1	86.1
	Female	33	13.9	13.9	100.0
	Total	237	100.0	100.0	

Respondents' educational level: Table 8.4 shows that the majority of respondents (83.5%) have a bachelor degree. The second largest group have a master degree (9.7%). The researcher noted that an increasing number of professionals in Egypt tend to acquire higher degrees (i.e. MBA) -in order to differentiate themselves- as the requirements for job advancement are on a rise and competition to acquire higher positions is intensifying.

Respondent Educational Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Technical Qualification	12	5.1	5.1	5.1
	B.Sc. Degree	198	83.5	83.5	88.6
	Master Degree	23	9.7	9.7	98.3
	Doctorate Degree	4	1.7	1.7	100.0
	Total	237	100.0	100.0	

Formal type of organization: Table 8.5 shows that corporate companies dominated the sample 47.3%, and then came private organizations in second place with 36.7%. Multinationals, sole ownership, and previously public owned all have less than 10% each.

Formal Type of Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private	87	36.7	36.7	36.7
	Multi_National	12	5.1	5.1	41.8
	Previously Public Owned	5	2.1	2.1	43.9
	Corporate	112	47.3	47.3	91.1
	Sole Ownership	21	8.9	8.9	100.0
	Total	237	100.0	100.0	

Respondents' positions: Table 8.6 shows that 68.8% of respondents were occupiers of middle management positions, while 31.2% occupied higher management positions.

Respondent Position/Level Within The Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Middle Management	163	68.8	68.8	68.8
	Higher Management	74	31.2	31.2	100.0
	Total	237	100.0	100.0	

Years since hire: Table 8.7 shows that 47.7% of respondents spent 6-10 years with their respective organizations. 30.4% spent 11-15 years, and 17.3% spent 1-5 years with their organizations.

Period with the organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than a year	4	1.7	1.7	1.7
	1-5 years	41	17.3	17.3	19.0
	6-10 years	113	47.7	47.7	66.7
	11-15 years	72	30.4	30.4	97.0
	16-20 years	3	1.3	1.3	98.3
	Over 20 years	4	1.7	1.7	100.0
	Total	237	100.0	100.0	

Industry group: Table 8.8 illustrates the different respondent percentages and their respective fields of production. Pharmaceutical, machinery, textile, food & catering, and furniture each were more than 10% of the sample.

Industry Group for Primary Product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Transportation Equipment	3	1.3	1.3	1.3
	Electrical/Electronics	16	6.8	6.8	8.0
	Precision Eqipment	11	4.6	4.6	12.7
	Aerospace & Defence	6	2.5	2.5	15.2
	Pharmaceuticals	29	12.2	12.2	27.4
	Wood & Building Materials	18	7.6	7.6	35.0
	Machinery	33	13.9	13.9	48.9
	Textile	35	14.8	14.8	63.7
	Food & Catering	31	13.1	13.1	76.8
	Chemicals	16	6.8	6.8	83.5
	Steel	5	2.1	2.1	85.7
	Construction	2	.8	.8	86.5
	Oil / Rubber / Glass	6	2.5	2.5	89.0
	Pulp & Paper	1	.4	.4	89.5
	Furniture	24	10.1	10.1	99.6
	Other	1	.4	.4	100.0
	Total	237	100.0	100.0	

2.3 Normality Test

The test for normality is required to come to a decision as to which statistical tests (parametric or non-parametric) are the most suitable to be performed.

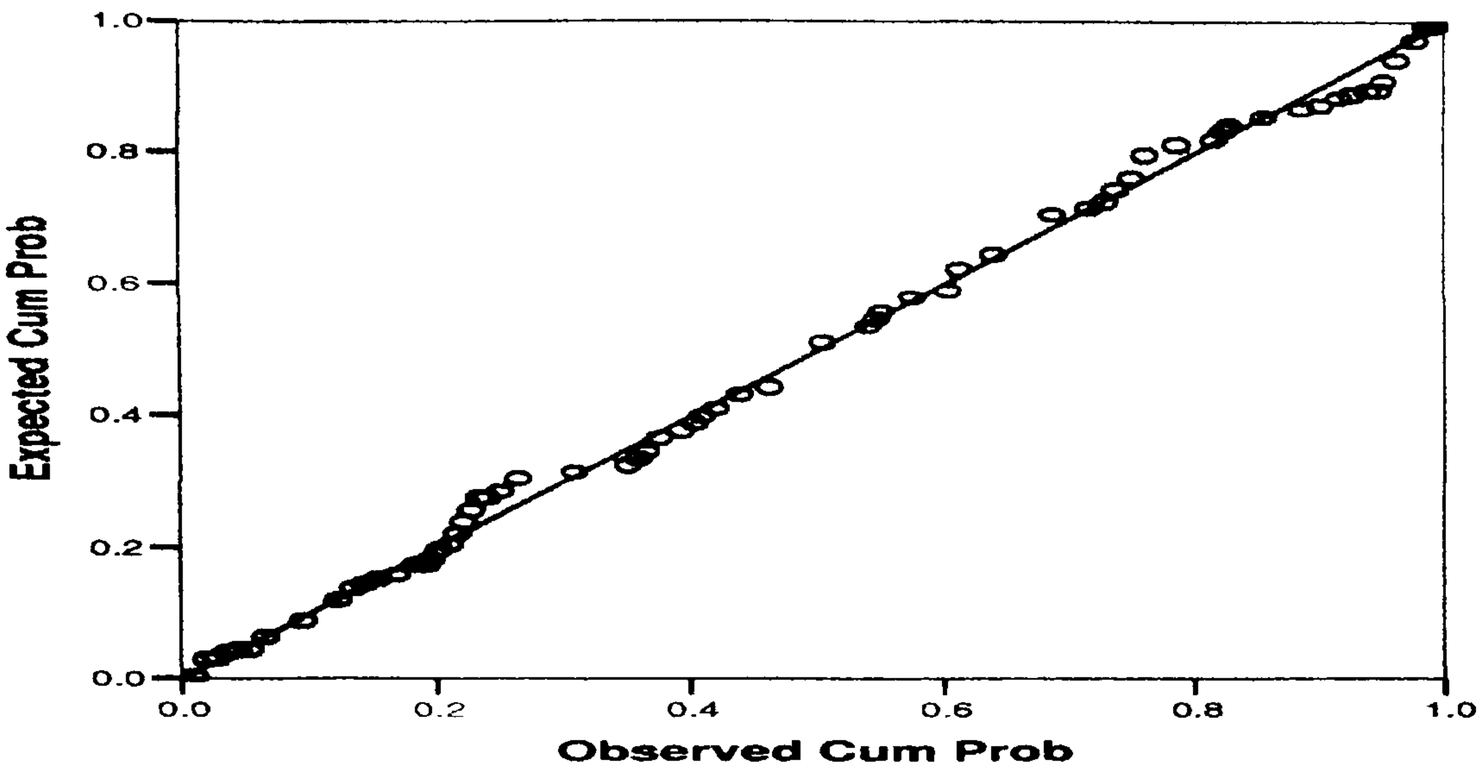
(Castillo and Cochran, 1985) asserted that to formally test the candidate distribution, a goodness of fit test must be performed. The widely used tests under these circumstances are the Chi-squared and the Kolmogorove-Smirnove (KS) tests. These tests are often not powerful for small to moderate sample size (n). On the other hand, if (n) is very large, these tests will always reject the null Hypothesis (H_o). Since H_o is never exactly true, even a negligible small deviation from the hypothesized distribution will be detected for

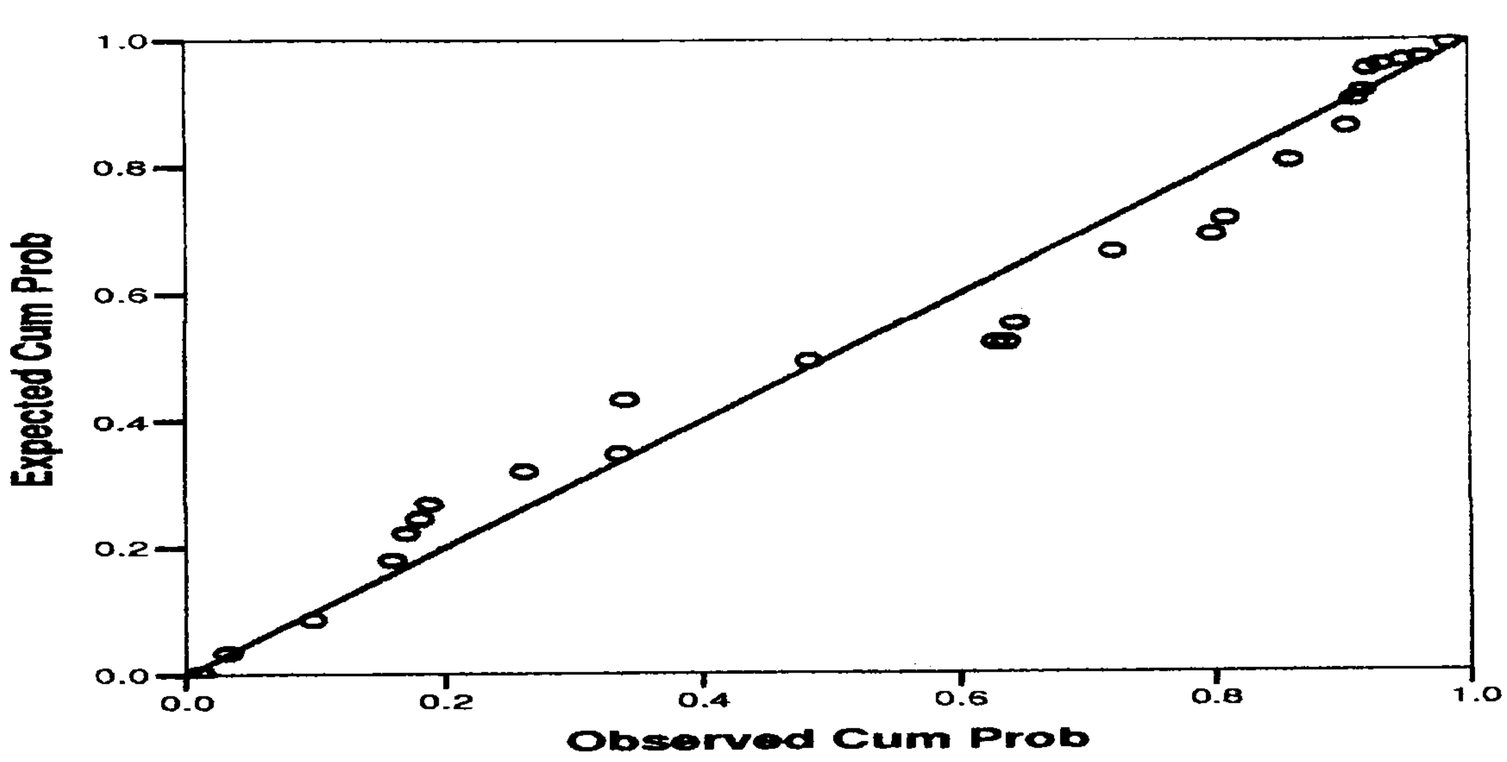
large samples, and hence H_o will be rejected while it is approximately true. Therefore, in this case it is preferable to use informal tests (graph) such as the P-P plot.

According to (Ragheb, 2005), distribution fitting or goodness of fit can be conducted using the Chi-squared goodness of fit or the Kolmogorove-Smirnove test (KS-test). These two tests can be used to test the hypothesis that a data has a certain distribution (Poisson, exponential, normal... etc...). Some other tests are available to test the normality of the data such as Lin-Mudholkar. He suggested some useful guidelines to assist the researcher in selecting the proper goodness of fit test as follows: (I) if the sample size is large (n > 150) use the Chi-squared test; (II) If the sample size is less that 150, use KS-test; (III) When testing for normality, use the Lon-Mudholkar test, unless the distribution appears long tailed and Symmetrical, then use KS-test; (IV) If testing for Poisson, use Chi-squared test, unless the sample size is too small, then use the KS-test; (V) When using the Chi-squared test, attempt to achieve the largest number of classes possible while maintaining five observations per class and not exceeding forty classes; (VI) When applying the KS-test, if possible try for ungrouped data; (VII) If time permits it, utilize all tests and compare results.

The P-P Plot test for normality is administered to differentiate between Normal and not normal constructs. This differentiation is -in turn- going to be used as a basis to decide the usage of Parametric/Non-Parametric tests of hypotheses.

An example of normally distributed and not-normally distributed data is illustrated in the following two plots. (Figure 8.1)





The tighter the dispersion of data to the diagonal line the closer it is to a normal distribution (i.e. MA tasks and change). The more dispersed the plots, the more not-normal the data is (i.e. environmental surroundings).

The following table (8.9) shows the classification of constructs into normal and not-normal according to their respective P-P Plot diagrams. In performing normality tests, we investigate the following hypotheses:

H_O: Data is normally distributed.

H_1: Data is not normally distributed.

Normal	Not-Normal
- MA tasks & change	- External stakeholders
- Coordination & teamwork	- Current MA techniques
- External factors	- Informal / personal factors
- Training	- Decision making
- Personal skills	- Environmental surroundings
- Organizational factors	- Pricing methods

To further confirm and support the results of the P-P plot test, the Kolmogorov-Smirnov (K-S) test of normality is administered.

The results of the K-S test confirmed that constructs M.A. tasks & change, and personal skills, as an example, are normally distributed with significance levels .541, and .079 respectively.

2.4 *Hypothesis testing*

2.4.1 Hypothesis testing for normal factors

A one sample T-test is administered to measure whether the mean of a single variable differs from a specified constant. The t-Value is then compared to a value extracted from a statistics table (tabulated value) at the specified level of confidence (95%).

In our case, the tabulated value corresponding to the sample size larger than 150 (n=237), at the level of confidence (95%) is equal to [-1.645] for the left-tailed test.

The following table (8.10) illustrates the calculated t-value of the normal constructs.

Construct	T. Value	Sig. level
MA tasks & change	5.895	0.000
Coordination & teamwork	-3.491	0.001
External factors	-11.093	0.000
Training	-42.217	0.000
Personal skills	9.299	0.000
Organizational culture	-11.070	0.000

By comparing the tabulated value -1.645 to the t-value pertaining to each construct, we can decide whether to reject/not reject the research hypothesis under evaluation.

I. **MA tasks and perception of change:**

H_0: Management accounting tasks and perception of management accounting change ***do not have*** an effect on the application of target costing (as a new management accounting technique) within the organization.

H_1: Management accounting tasks and perception of management accounting change ***have an effect*** on the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
MA tasks & change	5.895	0.00

By comparing the t-value to the tabulated value, we find 5.895 > -1.645; therefore, we do not reject H_0. In other words, we can state that management accounting tasks and perception of management accounting change ***do not have an effect*** on the application of target costing within the organization with a 95% confidence level.

II. Coordination & teamwork:

H_0: Coordination & teamwork ***do not influence*** the application of target costing (as a new management accounting technique) within the organization.

H_1: Coordination & teamwork ***do influence*** the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
Coordination & teamwork	-3.491	0.001

By comparing the t-value to the tabulated value, we find -3.491 < -1.645; therefore, we reject H_0. In other words, we can state that coordination & teamwork ***do influence*** the application of target costing within the organization at a 95% level of confidence.

III. External factors:

H_0: External factors surrounding the organization ***do not affect*** the application of target costing (as a new management accounting technique) within the organization.

H_1: External factors surrounding the organization ***do affect*** the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
External factors	-11.093	0.00

By comparing the t-value to the tabulated value, we find -11.093 < -1.645; therefore, we reject H_0. In other words, we can state that external factors surrounding the organization ***do affect*** the application of target costing within the organization at a 95% level of confidence.

IV. Level of training:

H_0: Training levels ***do not influence*** the application of target costing (as a new management accounting technique) within the organization.

H_1: Training levels ***do influence*** the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
Training	-42.217	0.00

By comparing the t-value to the tabulated value, we find -42.217 < -1.645; therefore, we reject H_0. In other words, we can state that the level of training ***does influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

V. Personal skills:

H_0: Personal skills ***are not important*** in determining the success of the application of target costing (as a new management accounting technique) within the organization.

H_1: Personal skills ***are important*** in determining the success of the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
Personal skills	9.299	0.00

By comparing the t-value to the tabulated value, we find 9.299 > -1.645; therefore, we do not reject H_0. In other words, we can state that Personal skills ***are not important*** in determining the success of the application of target costing within the organization at a 95% level of confidence.

VI. Organizational culture:

H_0: The organizational culture ***does not influence*** the application of target costing (as a new management accounting technique) within the organization.

H_1: The organizational culture ***does influence*** the application of target costing (as a new management accounting technique) within the organization.

Construct	t-value	Sig.
Organizational culture	-11.070	0.00

By comparing the t-value to the tabulated value, we find -11.070 < -1.645; therefore, we reject H_0. In other words, we can state that the organizational culture ***does influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

To summarize:

Construct	Decision
MA tasks and perception of change	Do not affect the application of Target Costing
Coordination & teamwork	Do affect the application of Target Costing
External factors	Do affect the application of Target Costing
Level of training	Does affect the application of Target Costing
Personal skills	Are not important in determining the success of the application of Target Costing
Organizational culture	Does influence the application of Target Costing

2.4.2 Hypothesis testing for non-normal factors

In the case of factors that are not normal, the Sign test -as a non-parametric test- is administered. Unfortunately, this test is not available in SPSS, therefore, the following equation is used to obtain the Z value for each construct. (Lind et al., 2001)

$$Z = \frac{(x \pm 0.5) - 0.5n}{0.5\sqrt{n}}$$

Where:

Z = test-statistic.

n = number of observations (sample size).

x = number of (+) or (-) signs.

If the number of (+) signs > n/2 [237/2], then the equation used is:

$$Z = \frac{(x - 0.5) - 0.5n}{0.5\sqrt{n}}$$

Otherwise (number of (+) signs < n/2) then the equation applied would be:

$$Z = \frac{(x + 0.5) - 0.5n}{0.5\sqrt{n}}$$

By comparing the corresponding Z values to the tabulated t-value used in the previous test, the researcher is able to decide whether to reject/not reject the research hypotheses.

Construct	Z value	Tabulated value
External Stakeholders	13.90	
Current MA techniques	13.50	
Informal / personal factors	14.02	-1.645
Decision making	12.07	
Environmental surroundings	5.06	
Pricing methods	3.24	

I. External Stakeholders

H_0: The organization's external stakeholders ***do not influence*** the application of target costing within the organization.

H_1: The organization's external stakeholders ***do influence*** the application of target costing (as a new management accounting technique) within the organization.

Construct	Z value
External stakeholders	13.90

By comparing the Z value to the tabulated value, we find 13.90 > -1.645; therefore, we do not reject H_0. In other words, we can state that the organization's external stakeholders ***do not influence*** the application of target costing within the organization at a 95% level of confidence.

II. Current MA techniques

H_0: The current management accounting techniques ***do not affect*** the application of target costing (as a new management accounting technique) within the organization.

H_1: The current management accounting techniques ***do affect*** the application of target costing (as a new management accounting technique) within the organization.

Construct	Z value
Current MA techniques	13.50

By comparing the Z value to the tabulated value, we find 13.50 > -1.645; therefore, we do not reject H_0. In other words, we can state that the current management accounting techniques ***do not affect*** the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

III. Informal / personal factors

H_0: Informal/Personal Factors ***are not important*** in determining the success of the application of target costing (as a new management accounting technique) within the organization.

H_1: Informal/Personal Factors ***are important*** in determining the success of the application of target costing (as a new management accounting technique) within the organization.

Construct	Z value
Informal / personal factors	14.02

By comparing the Z value to the tabulated value, we find 14.02 > -1.645; therefore, we do not reject H_0. In other words, we can state that the Informal/Personal Factors ***are not important*** in determining the success of the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

IV. Decision making

H_0: The decision making processes ***do not affect*** the application of target costing (as a new management accounting technique) within the organization.

H_1: The decision making processes ***do affect*** the application of target costing (as a new management accounting technique) within the organization.

Construct	Z value
Decision making	12.07

By comparing the Z value to the tabulated value, we find 12.07 > -1.645; therefore, we do not reject H_0. In other words, we can state that the decision making processes ***do not affect*** the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

V. Environmental surroundings

H_0: Environmental surroundings ***do not have an effect*** on the application of target costing (as a new management accounting technique) within the organization.

H_1: Environmental surroundings ***have an effect*** on the application of target costing (as a new management accounting technique) within the organization

Construct	Z value
Environmental surroundings	5.06

By comparing the Z value to the tabulated value, we find 5.06 > -1.645; therefore, we do not reject H_0. In other words, we can state that the environmental surroundings ***do not***

have an effect on the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

VI. Pricing methods

H_0: Current pricing methods ***does not have an effect*** on the application of target costing (as a new management accounting technique) within the organization.

H_1: Current pricing methods ***have an effect*** on the application of target costing (as a new management accounting technique) within the organization.

Construct	Z value
Pricing methods	3.24

By comparing the Z value to the tabulated value, we find 3.24 > -1.645; therefore, we do not reject H_0. In other words, we can state that the current pricing methods ***do not have*** an effect on the application of target costing (as a new management accounting technique) within the organization at a 95% level of confidence.

To summarize:

Construct	Decision
External Stakeholders	Do not influence the application of Target Costing
Current MA techniques	Do not influence the application of Target Costing
Informal / personal factors	Are not important in determining the success of the application of Target Costing
Decision making	Does not influence the application of Target Costing
Environmental surroundings	Do not have an effect on the application of Target Costing
Pricing methods	Do not have an effect on the application of Target Costing

2.4.3 Familiarity with Target Costing

Response		Frequency	%
Valid	I am not sure	6	2.5
	Never seriously considered implementing TC	32	13.5
	Considered/attempted TC, but did not implement	90	38.0
	Considered TC, but have not made a decision	72	30.4
	Attempted TC, but abandoned it	30	12.7
	Planning to implement TC in the future	7	3.0
	Total	237	100.0 %

In analyzing the first research hypothesis stating that "*In Egypt, organizations either are not familiar with or would not apply new Target Costing as an example of management accounting techniques*", the following results were gathered.

As the previous frequency table shows, 68.4% (38% + 30.4%) of respondents considered implementing TC but either did not implement, or have not made a decision yet. 26.2% either never seriously considered implementing TC, or attempted TC but abandoned it. The remaining 5.4% were either not sure if they implemented TC, or are planning to implement it in the future. The two remaining available responses were never selected in any of the returned questionnaires.

In order to get a clearer picture, the Chi-Square test is implemented. The Chi-Square Test procedure tabulates a variable into categories and tests the hypothesis that the observed frequencies do not differ from their expected values.

H_O: $\pi_1 = \pi_2 = \pi_3 = \pi_4 \ldots$

H_1: At least two are not equal. Where:

π_1 = Percentage of respondents that ticked "I am not sure"

π_2 = Percentage of respondents that ticked "Never seriously considered implementing TC" [and so on]...

The following table (8.11) shows the Chi-Square results using these hypotheses

	Usage of Target Costing
Chi-Square	150.165
df	5
Asymp. Sig	.000

By comparing the sig. value (.000) to the Alpha value (.05), we find that sig. $<$ Alpha; therefore, we reject H_O at a 95% level of confidence. In other words, the percentages of respondents are not equal between the different available responses at a 95% level of confidence.

More than one trial with several different values was administered. By assigning (forcing) specific weights (percentages) to the different available responses, and running the Chi-Square test again, the researcher was able to determine the approximate real weight for each available response.

The following table (8.12) illustrates the different weights assigned to each available response:

I am not sure	5%
We never seriously considered implementing TC	10%
We considered/attempted TC, but did not implement	40%
We considered TC, but have not made a decision	30%
We attempted TC but abandoned it	10%
We are planning to implement TC in the future	5%
We recently adopted TC, but have not fully implemented it	0%
Target Costing is well established in our business unit	0%

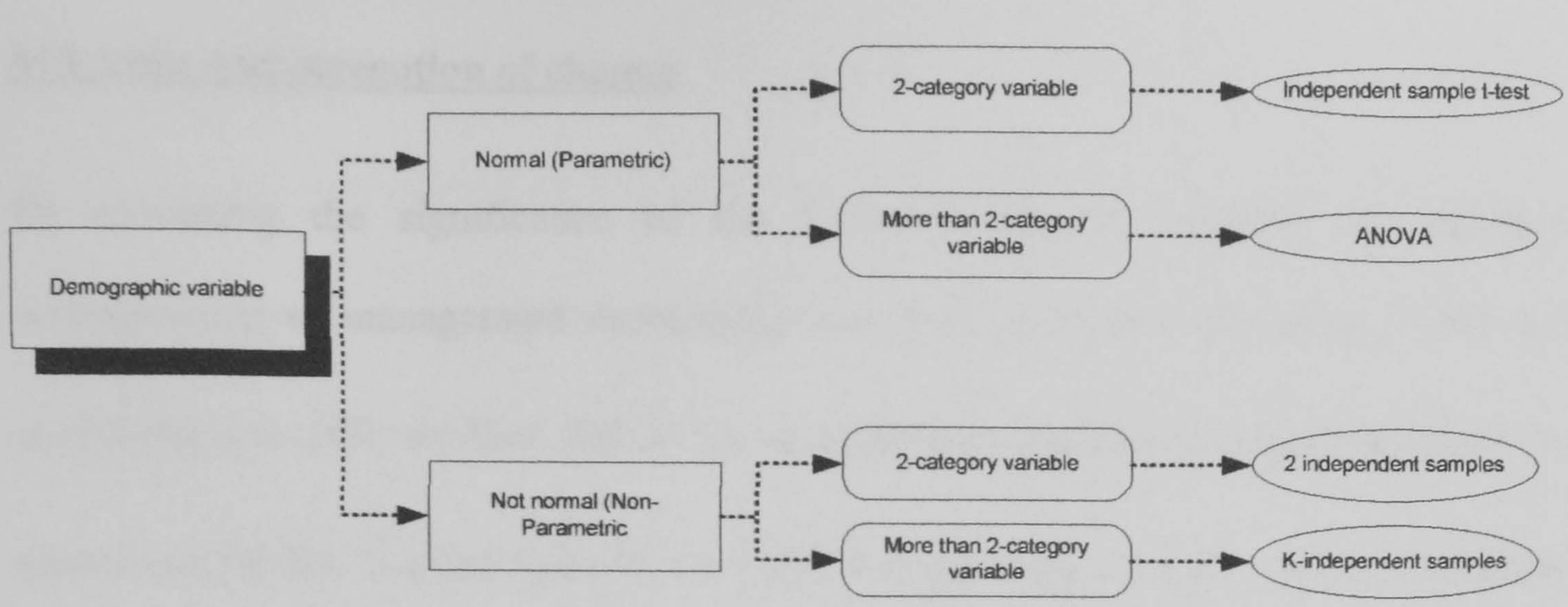
The following table (8.13) shows the Chi-Square results using the new weighted hypothesis

	Usage of Target Costing
Chi-Square	9.709
df	5
Asymp. Sig	.084

By comparing the sig. value (.084) to the Alpha value (.05), we find that sig. > Alpha; therefore, we do not reject H_O at a 95% level of confidence. In other words, the majority of respondents (***70%***) considered implementing TC but either did not implement, or have not made a decision yet. (***20%***) either never seriously considered implementing TC, or attempted TC but abandoned it. The remaining (***10%***) were either not sure if they implemented TC, or are planning to implement it in the future. The two remaining available responses were never selected in any of the returned questionnaires and; therefore, were not assigned any weight.

2.5 Effects of demographics

The following simple diagram (Figure 8.2) illustrates the different statistical tests applied in this section of the analysis.



2.5.1 Effect of demographics for normal (Parametric) tests

Factors of two categories (Independent sample t-test)

The purpose of this section is to test the effect of gender on the normally distributed constructs.

Gender:

As a normally distributed 2-category variable, the independent sample t-test is used. What the test aims to measure is whether there is a significant difference between the means of male and female opinions in responding to the questionnaire.

H_o: $\mu_1 = \mu_2$

H_1: $\mu_1 \neq \mu_2$

Where μ_1 = Mean of male responses & μ_2 = Mean of female responses.

MA tasks and perception of change

By extracting the significance of the Levene's test for equality of variances corresponding to management accounting tasks and perception of change (.349) and comparing it to (.05), we find .349 > .05 meaning that variances are equal; therefore, we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance assumed' (.396). Subsequently, by comparing (.396) to (.05), we find .396 > .05 therefore, we do not reject H_O. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating MA tasks and perception of change.

Coordination & teamwork

By extracting the significance of the Levene's test for equality of variances corresponding to Coordination & teamwork (.000) and comparing it to (.05), we find .00 < .05; therefore, we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance not assumed' (.001). Subsequently, by comparing (.001) to (.05), we find .001 < .05; therefore, we reject H_O. In other words, we can state that ***there is a significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating coordination & teamwork.

External factors

By extracting the significance of the Levene's test for equality of variances corresponding to the external factors (.108) and comparing it to (.05), we find .108 > .05; therefore we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance assumed' (.465). Subsequently, by comparing (.465) to (.05), we find .465 > .05; therefore, we do not reject H_O. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating the external factors.

Level of training

By extracting the significance of the Levene's test for equality of variances corresponding to the level of training (.407) and comparing it to (.05), we find .407 > .05; therefore we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance assumed' (.460). Subsequently, by comparing (.460) to (.05), we find .460 > .05; therefore, we do not reject H_O. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating the level of training.

Personal skills

By extracting the significance level corresponding to the personal skills (.631) and comparing it to (.05), we find .631 > .05; therefore we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance assumed' (.187). Subsequently, by

comparing (.187) to (.05), we find .187 > .05; therefore, we do not reject H_O. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating personal skills.

Organizational culture

By extracting the significance of Levene's test for equality of variances corresponding to the organizational culture (.028) and comparing it to (.05), we find .028 < .05; therefore we should use the Sig. 2-tailed value of the t-test corresponding to 'equal variance not assumed' (.085). Subsequently, by comparing (.085) to (.05), we find .085 > .05; therefore, we do not reject H_O. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating the organizational culture.

To summarize:

Construct	Decision
MA tasks and perception of change	No significant difference between gender opinions.
Coordination & teamwork	There is a significant difference between gender opinions.
External factors	No significant difference between gender opinions.
Level of training	No significant difference between gender opinions.
Personal skills	No significant difference between gender opinions.
Organizational culture	There is a significant difference between gender opinions.

The following table shows the independent samples statistical output:

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Recoded MA tasks & change	Equal variances assumed	.880	.349	-.850	235	.396	-.065	.077	-.216	.086
	Equal variances not assumed			-.838	42.549	.407	-.065	.078	-.222	.092
Recoded coordination & Teamwork	Equal variances assumed	13.351	.000	-1.407	235	.161	-.078	.056	-.188	.031
	Equal variances not assumed			-3.504	203.000	.001	-.078	.022	-.123	-.034
Recoded external factors	Equal variances assumed	2.603	.108	-.732	228	.465	-.071	.097	-.263	.121
	Equal variances not assumed			-.784	44.035	.437	-.071	.091	-.255	.112
Recoded training	Equal variances assumed	.690	.407	-.739	235	.460	-.088	.119	-.323	.147
	Equal variances not assumed			-.781	44.944	.439	-.088	.113	-.316	.139
Recoded personal skills	Equal variances assumed	.231	.631	1.323	234	.187	.121	.092	-.059	.302
	Equal variances not assumed			1.107	37.180	.275	.121	.110	-.101	.343
Recoded organizational culture	Equal variances assumed	4.883	.028	1.874	235	.062	.166	.089	-.009	.341
	Equal variances not assumed			1.764	41.248	.085	.166	.094	-.024	.356

Factors of more than two categories (ANOVA)

The purpose of this section is to test the effect of the remaining demographic factors on the normally distributed constructs.

As normally distributed, more-than-2-category variables, the ANOVA test is applied. The One-Way ANOVA procedure can be used to test the hypothesis that the means of two or more groups are/are not significantly different. An important first step in the analysis of variance is establishing the validity of assumptions. One assumption of ANOVA is that the variances of the groups are equivalent. The result of the SPSS analysis shows that variances are homogeneous. In this section, we test the following hypothesis:

H_o: $\mu_1 = \mu_2 = \mu_3 = \ldots\ldots\ldots\ldots$

H_1: At least two means are not equal

The following table (8.15) illustrates the different constructs and their corresponding sig. values.

Construct	Age	Educational level	Formal type of organization	Position with the organization	Period with the organization	Type of business
MA tasks and perception of change	.032	.000	.720	.594	.090	.000
Coordination & teamwork	.148	.496	.021	.158	.000	.000
External factors	.000	.494	.000	.001	.009	.000
Level of training	.255	.053	.169	.992	.119	.013
Personal skills	.000	.000	.420	.000	.000	.000
Organizational culture	.000	.015	.002	.031	.034	.003

By comparing the Sig. values to .05, the decision whether to reject H_O or not can be made as follows.

Age

By reviewing the age sig. values, we can conclude that MA tasks and perception of change, external factors, personal skills, and organizational culture all have values less than .05; consequently, we reject H_O at a 95% confidence level. In other words, ***the opinions of all age groups that contributed to the survey are significantly different.***

To further investigate which specific age groups have the significant difference, we consult the Bonferroni table in the statistics appendix.

As for coordination and teamwork, and level of training, sig. values were greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, ***the opinions of two or more age groups that contributed to the survey are not significantly different.***

Educational level

By reviewing the educational level sig. values, we can conclude that MA tasks and perception of change, personal skills, and organizational culture all have values less than .05; consequently, we reject H_O at a 95% confidence level. In other words, ***the opinions of two or more educational level groups that contributed to the survey are significantly different.***

To further investigate which specific educational level groups have the significant difference, we consult the Bonferroni table in the statistics appendix.

As for coordination and teamwork, external factors, and level of training, sig. values were greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, ***the opinions of all educational level groups that contributed to the survey are not significantly different.***

Formal type of organization

By reviewing the formal type of organization sig. values, we can conclude that coordination and teamwork, external factors, and organizational culture all have values less than .05; consequently, we reject H_O at a 95% confidence level. In other words, ***the opinins of two or more formal type of organization groups that contributed to the survey are significantly different.***

As for MA tasks and perception of change, level of training, and personal skills, sig. values are greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, ***the opinions of all formal type of organization groups that contributed to the survey are not significantly different.***

To further investigate which specific formal types of organization groups have the significant difference, we consult the Bonferonni table in the statistics appendix.

Position with the organization

By reviewing the position with the organization sig. values, we can conclude that external factors, personal skills, and organizational culture all have values less than .05; consequently, we reject H_O at a 95% confidence level. In other words, ***the opinions of two or more position with the organization groups that contributed to the survey are significantly different.***

To further investigate which specific position with the organization groups have the significant difference, we consult the Bonferroni table in the statistics appendix.

As for MA tasks and perception of change, coordination and teamwork, and level of training, sig. values are greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, ***the opinions of all position with the organization groups that contributed to the survey are not significantly different.***

Period with the organization

By reviewing the Period with the organization sig. values, we can conclude that coordination and teamwork, external factors, personal skills, and organizational culture all have values less than .05; consequently, we reject H_O at a 95% confidence level. In other words, ***the opinions of two or more Period with the organization groups that contributed to the survey are significantly different.***

To further investigate which specific Period with the organization groups have the significant difference, we consult the Bonferroni table in the statistics appendix.

As for MA tasks and perception of change, and level of training, sig. values were greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, ***the opinions of all Period with the organization groups that contributed to the survey are not significantly different.***

Formal type of business

By reviewing the formal type of business sig. values, we find that all the constructs have values less than .05; consequently, we reject H_O at a 95% confidence level. In other

words, ***the opinions of two or more formal type of business groups that contributed to the survey are significantly different.***

To further investigate which specific formal type of business groups have the significant difference, we consult the Bonferroni table in the statistics appendix.

To summarize:

Construct	**Decision**					
	Age	**Education level**	**Formal type of organization**	**Position with organization**	**Period with organization**	**Type of business**
MA tasks and perception of change	***No sig. diff.***	***No sig. diff.***	Sig. Diff.	Sig. Diff.	Sig. Diff.	***No sig. diff.***
Coordination & teamwork	Sig. Diff.	Sig. Diff.	***No sig. diff.***	Sig. Diff.	***No sig. diff.***	***No sig. diff.***
External factors	***No sig. diff.***	Sig. Diff.	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***
Level of training	Sig. Diff.	Sig. Diff.	Sig. Diff.	Sig. Diff.	Sig. Diff.	***No sig. diff.***
Personal skills	***No sig. diff.***	***No sig. diff.***	Sig. Diff.	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***
Organizational culture	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***	***No sig. diff.***

2.5.2 Effect of demographics for not-normal (non-parametric) tests

Factors of two categories (Independent samples test)

The advantage of the two-independent samples / non-parametric test over the independent-samples t-test is that it *does not assume normality* and can be used to test ordinal variables

What the two-independent samples test aims to measure is whether there is a significant difference between the means of males' and females' opinions in responding to the questionnaire.

Therefore, the test hypotheses can be illustrated as follows:

H_o: $M_1 = M_2$

H_1: $M_1 \neq M_2$

Where M_1 = Median of male responses & M_2 = Median of female responses.

	External stakeholders	current MA techniques	informal factors	decision making	environmental surroundings	pricing methods
Mann-Whitney U	3217.500	2987.000	2680.000	3003.000	2515.500	2748.000
Wilcoxon W	3778.500	23897.000	23386.000	3564.000	23425.500	23658.000
Z	-.694	-2.259	-2.168	-1.229	-2.761	-1.947
Asymp. Sig. (2-tailed)	.488	.024	.030	.219	.006	.052

In (table 8.16), and by comparing the Sig. values to .05, the researcher is able to decide whether to reject/not reject the null hypotheses.

For constructs Current MA techniques, informal factors, and environmental surroundings, we find that their respective sig. values are .024, .030, and .006

All the sig. values are less than .05; therefore, we reject H_O at a 95% confidence level. In other words, we can state that ***there is a significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating current MA techniques, informal factors, and environmental surroundings.

On the other hand, we find that constructs external stakeholders, decision making, and pricing methods have the following sig. levels .488, .219, and .052 respectively.

All the sig. values are greater than .05; therefore, we do not reject H_O at a 95% confidence level. In other words, we can state that ***there is no significant difference*** between the opinions of male and female respondents at a 95% level of confidence when evaluating the external stakeholders, decision making, and pricing methods constructs.

Factors of more than two categories (K-independent samples test)

By comparing the alpha value (.05) to the respective construct sig. value, the researcher is able to reject/not reject the research hypotheses. (Table 8.17)

	External stakeholders	Current MA techniques	Informal factors	Decision making	Environmental surroundings	Pricing methods
age	.579	.228	.308	.056	.000	.319
Educational level	.896	.758	.001	.445	.010	.537
Formal type of organization	.444	.000	.000	.000	.140	.618
Position with the organization	.000	.099	.638	.303	.000	.171
Period with the organization	.005	.001	.011	.069	.001	.296
Industry group	.312	.000	.000	.017	.000	.364

I) External stakeholders

H_O: The influence of the external stakeholders on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of the external stakeholders on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

	External stakeholders
age	.579
Educational level	.896
Formal type of organization	.444
Position with the organization	.000
Period with the organization	.005
Industry group	.312

After inspecting the above table, we find that Position with the organization, and period with the organization have sig. levels of .000, and .005 respectively. These values are less than the alpha value of .05; therefore, we reject H_O. In other words, we can state that for the position and period with the organization constructs, the organization's external stakeholders ***differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

On the other hand, after inspecting the above table, we find that age, educational level, formal type of organization, and industry group, have sig. levels of .579, .896, .444, and .312 respectively. These values are greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the education level, formal type of organization, and industry group constructs, the organization's external stakeholders ***do not differently***

influence the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

II) Current MA techniques

H_O: The influence of the Current MA techniques on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of the current MA techniques on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

	Current MA techniques
age	.228
Educational level	.758
Formal type of organization	.000
Position with the organization	.099
Period with the organization	.001
Industry group	.000

After inspecting the above table, we find that formal type of organization, period with the organization, and industry group have sig. levels of .000, .001, and .000 respectively. These values are less than the alpha value of .05; therefore, we reject H_O. In other words, we can state that for the formal type of organization, period with the organization, and industry group constructs, the current MA techniques ***do differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

On the other hand, after inspecting the above table, we find that age, educational level, and position within the organization, have sig. levels of .228, .758, and .099 respectively. These

values are greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the age, education level, and position within the organization constructs, the current MA techniques ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

III) Informal factors

H_O: The influence of the informal factors on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of the informal factors on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

Informal factors

age	.308
Educational level	.001
Formal type of organization	.000
Position with the organization	.638
Period with the organization	.011
Industry group	.000

After inspecting the above table, we find that educational level, formal type of organization, period with the organization, and industry group have sig. levels of .001, .000, .011, and .000 respectively. These values are less than the alpha value of .05; therefore, we reject H_O. In other words, we can state that for the educational level, formal type of organization, period with the organization, and industry group constructs, informal factors ***do differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

On the other hand, after inspecting the above table, we find that age, and position within the organization, have sig. levels of .308, .758, and .638 respectively. These values are greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the age and position within the organization constructs, informal factors ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

IV) Current pricing methods

H_O: The influence of the current pricing methods on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of the current pricing methods on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

	Pricing methods
age	.319
Educational level	.537
Formal type of organization	.618
Position with the organization	.171
Period with the organization	.296
Industry group	.364

After inspecting the above table, we find that all the variables (age, educational level, formal type of organization, position within the organization, period with the organization, and industry group) have sig. levels of .319, .537, .618, .171, .296, and .364 respectively. These values are greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the age, educational level, formal type of organization, position within

the organization, period with the organization, and industry group constructs, the organization's current pricing methods ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

V) Environmental surroundings

H_O: The influence of the environmental surroundings on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of the environmental surroundings on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

	Environmental surroundings
age	.000
Educational level	.010
Formal type of organization	.140
Position with the organization	.000
Period with the organization	.001
Industry group	.000

After inspecting the above table, we find that age, educational level, position with the organization, period with the organization, and industry group have sig. levels of .000, .010, .000, .001, and .000 respectively. These values are less than the alpha value of .05; therefore, we reject H_O. In other words, we can state that for the age, educational level, position with the organization, period with the organization, and industry group constructs, environmental surroundings ***differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

On the other hand, after inspecting the above table, we find that formal type of organization has sig. levels of .140. This value is greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the formal type of organization is concerned, environmental surroundings ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

VI) Decision making

H_O: The influence of decision making on the application of target costing (as a new management accounting technique) ***is not affected by*** the different levels of the demographic variables.

H_1: The influence of decision making on the application of target costing (as a new management accounting technique) ***is affected by*** the different levels of the demographic variables.

	Decision making
age	.056
Educational level	.445
Formal type of organization	.000
Position with the organization	.303
Period with the organization	.069
Industry group	.017

After inspecting the above table, we find that formal type of organization, and industry group have sig. levels of .000, and .017 respectively. These values are less than the alpha value of .05; therefore, we reject H_O. In other words, we can state that for the formal type of organization, and industry group constructs, decision making ***differently influences*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

On the other hand, after inspecting the above table, we find that age, educational level, position, and period with the organization have sig. levels of .056, .445, .303, .069 respectively. These values are greater than the alpha value of .05; therefore, we do not reject H_O. In other words, we can state that for the age, educational level, position, and period with the organization constructs, decision making ***does not differently influence*** the application of target costing (as a new management accounting technique) within the organization at a 95% confidence level.

To summarize:

- When evaluating current MA techniques, informal factors, and environmental surroundings, we find that ***there is a significant difference*** between the opinions of male and female respondents.

When evaluating the external stakeholders, decision making, and pricing methods constructs, we find that ***there is no significant difference*** between the opinions of male and female respondents.

- We can state that for the position and period with the organization constructs, the organization's external stakeholders ***differently influence*** the application of target costing (as a new management accounting technique) within the organization.

Furthermore, we can state that for the education level, formal type of organization, and industry group constructs, the organization's external stakeholders ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

- We can state that for the formal type of organization, period with the organization, and industry group constructs, the current MA techniques ***differently influence*** the application of target costing (as a new management accounting technique) within the organization.

Furthermore, we can state that for the age, education level, and position within the organization constructs, the current MA techniques ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

- We can state that for the educational level, formal type of organization, period with the organization, and industry group constructs, informal factors ***do differently influence*** the application of target costing (as a new management accounting technique) within the organization.

Furthermore, we can state that for the age and position within the organization constructs, informal factors ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

- We can state that for the age, educational level, formal type of organization, position within the organization, period with the organization, and industry group constructs, the organization's current pricing methods ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

- we can state that for the age, educational level, position with the organization, period with the organization, and industry group constructs, environmental surroundings ***differently influence*** the application of target costing (as a new management accounting technique) within the organization.

Furthermore, we can state that for the formal type of organization is concerned, environmental surroundings ***do not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

- we can state that for the formal type of organization, and industry group constructs, decision making ***differently influences*** the application of target costing (as a new management accounting technique) within the organization.

Furthermore, we can state that for the age, educational level, position, and period with the organization constructs, decision making ***does not differently influence*** the application of target costing (as a new management accounting technique) within the organization.

2.6 The interaction effect between independent variables (factors)

In this section the researcher is trying to inspect whether there is an interaction effect between the independent variables as a whole (one unit/group) and their effect on the dependent variables.

These dependent variables are:

1- Usage of target costing

2- Lack of familiarity

3- Target costing is a passing fad

4- Faced with more pressing business problems

5- No top management support

6- Target costing not relevant to our type of business

7- Good understanding of our costs (cost structure)

8- Cross-functional cooperation is difficult to accomplish

9- People unwilling to change

10- Did not get any benefits from its use

11- Lack of knowledge / training about target costing

12- No reason to change our pricing methods

13- Missing targets is viewed negatively

14- Lack of systematic methods of incorporating customer input

15- The AIS does not support target costing

16- No rewards for achieving targets

17- More important initiatives

18- No resources for implementation

The general hypothesis under evaluation is

H_0: There ***is no interaction effect*** between different combinations of factor levels (independent variables) on a specific dependent variable.

H_1: There ***is an interaction effect*** between different combinations of factor levels (independent variables) on a specific dependent variable.

In the MANOVA table Sig. values are compared to 0.05

In case Sig. > 0.05, then we do not reject H_O. In case Sig. < 0.05, then we reject H_O.

I. Usage of target costing

By inspecting the MANOVA tables, the researcher found that all constructs have sig. levels above 0.05 (sig. > 0.05); Therefore, we do not reject H_O. In other words, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *usage of target costing* dependent variable at a confidence level of 95%.

II. Lack of familiarity

By inspecting the MANOVA tables, the researcher found that the external stakeholders and current management accounting techniques constructs together have a (.047) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of external stakeholders and current management accounting techniques on the *lack of familiarity* dependent variable at a confidence level of 95%. This means combinations of different levels of external stakeholders and current management accounting techniques have different effect on the lack of familiarity.

All other constructs have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *lack of familiarity* dependent variable at a confidence level of 95%.

III. Target costing is a passing fad

By inspecting the MANOVA tables, the researcher found that the informal factors and environmental surroundings constructs together have a (.004) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the informal factors and environmental surroundings on the *target costing is a passing fad* dependent variable at a confidence level of 95%. This means combinations of different levels of the informal factors and environmental surroundings have different effect on the target costing is a passing fad.

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *target costing is a passing fad* dependent variable at a confidence level of 95%.

IV. Faced with more pressing business problems

By inspecting the MANOVA tables, the researcher found that all constructs have sig. levels above 0.05 (sig. > 0.05); Therefore, we do not reject H_O. In other words, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *more pressing business problems* dependent variable at a confidence level of 95%.

V. No top management support

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Personal skills & Informal factors	.042
Informal factors & Decision making	.004
Personal skills & Environmental surroundings	.008
Personal skills, Informal factors & Environmental surroundings	.018
Decision making & Environmental surroundings	.022
Personal skills & Organizational culture	.009
Personal skills, Informal factors & Organizational culture	.007

In other words, there ***is an interaction effect*** between the combination of these constructs and the *no top management support* dependent variable at a confidence level of 95%. This means combinations of different levels of these factors have different effect on the dependent variable "no top management support".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *no top management support* dependent variable at a confidence level of 95%.

VI. Target costing not relevant to our type of business

By inspecting the MANOVA tables, the researcher found that the pricing methods and target costing non-usage constructs together have a (.029) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *target costing relevancy* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "target costing not relevant to our type of business".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *target costing relevancy* dependent variable at a confidence level of 95%.

VII. Good understanding of our costs (cost structure)

By inspecting the MANOVA tables, the researcher found that the pricing methods and target costing non-usage constructs together have a (.000) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *good understanding of cost structure* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "good understanding of cost structure".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *good understanding of cost structure* dependent variable at a confidence level of 95%.

VIII. Cross-functional cooperation is difficult to accomplish

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Pricing methods & Target costing non-usage	.041
Personal skills & organizational culture	.037

In other words, there ***is an interaction effect*** between the combination of these constructs and the *difficulty of cross-functional cooperation* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage as well as personal skills and organizational culture have different effects on the dependent variable "cross-functional cooperation is difficult to accomplish".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *difficult cross-functional cooperation* dependent variable at a confidence level of 95%.

IX. People unwilling to change

By inspecting the MANOVA tables, the researcher found that the pricing methods and target costing non-usage constructs together have a (.025) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *people unwilling to change* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "people unwilling to change".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *people unwilling to change* dependent variable at a confidence level of 95%.

X. Did not get any benefits from its use

By inspecting the MANOVA tables, the researcher found that the Informal factors, Environmental surroundings, and the organizational culture constructs together have a (.037) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the Informal factors, Environmental surroundings, and the Organizational culture on the *no benefits from use* dependent variable at a confidence level of 95%. This means combinations of different levels of informal factors, environmental surroundings, and the organizational cultures have different effect on the dependent variable "no benefits from use".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *no benefits from use* dependent variable at a confidence level of 95%.

XI. Lack of knowledge / training about target costing

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Pricing methods & Target costing non-usage	.008
External stakeholders & Current management accounting techniques	.050

In other words, there ***is an interaction effect*** between the combination of these constructs and the *lack of knowledge/training* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "lack of knowledge/training about target costing". As well as combinations of different levels of external stakeholders and current management accounting techniques on the dependent variable "lack of knowledge/training about target costing".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *lack of knowledge/training* dependent variable at a confidence level of 95%.

XII. No reason to change our pricing methods

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Pricing methods & Target costing non-usage	.022
External stakeholders & management accounting tasks and change	.016

In other words, there ***is an interaction effect*** between the combination of these constructs and the *No reason to change the pricing methods* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "no reason to change our pricing methods". As well as combinations of different levels of external stakeholders and

management accounting tasks and change on the dependent variable "no reason to change our pricing methods".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *No reason to change the pricing methods* dependent variable at a confidence level of 95%.

XIII. Missing targets is viewed negatively

By inspecting the MANOVA tables, the researcher found that the Pricing methods and the target costing non-usage constructs together have a (.000) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the pricing methods and the target costing non-usage on the *missing targets viewed negatively* dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "missing targets is viewed negatively".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *missing targets viewed negatively* dependent variable at a confidence level of 95%.

XIV. Lack of systematic methods of incorporating customer input

By inspecting the MANOVA tables, the researcher found that the Pricing methods and the target costing non-usage constructs together have a (.040) sig. level < 0.05; Therefore, we reject H_O. In other words, there ***is an interaction effect*** between the combination of the pricing methods and the target costing non-usage on the *lack of systematic methods of*

incorporating customer input dependent variable at a confidence level of 95%. This means combinations of different levels of pricing methods and target costing non-usage have different effect on the dependent variable "lack of systematic methods of incorporating customer input".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *lack of systematic methods of incorporating customer input* dependent variable at a confidence level of 95%.

XV. The AIS does not support target costing

By inspecting the MANOVA tables, the researcher found that all constructs have sig. levels above 0.05 (sig. > 0.05); Therefore, we do not reject H_O. In other words, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *AIS does not support target costing* dependent variable at a confidence level of 95%.

XVI. No rewards for achieving targets

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Pricing methods & Target costing non-usage	.046
Management accounting tasks and change & External stakeholders	.013
Management accounting tasks and change & External factors	.040
Management accounting tasks and change & Training	.008
Decision making & Informal factors	.042

In other words, there ***is an interaction effect*** between the combination of these constructs and the *no rewards for achieving targets* dependent variable at a confidence level of 95%.

This means combinations of different levels of: pricing methods and target costing non-usage; management accounting tasks and changes and external stakeholders; management accounting tasks and changes and external factors; management accounting tasks and changes and training; decision making and informal factors have different effect on the dependent variable "*no rewards for achieving targets*".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *no rewards for achieving targets* dependent variable at a confidence level of 95%.

XVII. More important initiatives

By inspecting the MANOVA tables, the researcher found that all constructs have sig. levels above 0.05 (sig. > 0.05); Therefore, we do not reject H_O. In other words, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *more important initiatives* dependent variable at a confidence level of 95%.

XVIII. No resources for implementation

By inspecting the MANOVA tables, the researcher found that the following construct combinations have sig. level < 0.05.

Source	Sig.
Pricing methods & Target costing non-usage	.000
Informal factors, Environmental surroundings & Organizational culture	.017

In other words, there ***is an interaction effect*** between the combination of these constructs and the *no resources for implementation* dependent variable at a confidence level of 95%. This means that combinations of different levels of: pricing methods; target costing non-

usage; informal factors; environmental surroundings, and organizational culture have different effects on the dependent variable "*no resources for implementation*".

All other construct mixtures have sig. levels above 0.05 (sig. > 0.05); Therefore, there ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *no resources for implementation* dependent variable at a confidence level of 95%.

To summarize:

a) No interaction effect

- There ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *usage of target costing* dependent variable

- There ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *more pressing business problems* dependent variable

- There ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *AIS does not support target costing* dependent variable

- There ***is no interaction effect*** between different combinations of factor levels (independent variables) on the *more important initiatives* dependent variable

b) Existing interaction effect

- There ***is an interaction effect*** between the combination of external stakeholders and current management accounting techniques on the *lack of familiarity* dependent variable

- There ***is an interaction effect*** between the combination of the informal factors and environmental surroundings on the *target costing is a passing fad* dependent variable

- There ***is an interaction effect*** between the combination of {Personal skills & Informal factors}, {Informal factors & Decision making}, {Personal skills & Environmental surroundings}, {Personal skills, Informal factors & Environmental surroundings}, { Decision

making & Environmental surroundings}, { Personal skills & Organizational culture}, { Personal skills, Informal factors & Organizational culture} and the *no top management support* dependent variable.

- There ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *target costing relevancy* dependent variable.

- There ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *good understanding of cost structure* dependent variable

- There ***is an interaction effect*** between the combination of {Pricing methods & Target costing non-usage}, {Personal skills & organizational culture} and the *difficulty of cross-functional cooperation* dependent variable.

- There ***is an interaction effect*** between the combination of the pricing methods and target costing non-usage on the *people unwilling to change* dependent variable

- There ***is an interaction effect*** between the combination of the Informal factors, Environmental surroundings, and the Organizational culture on the *no benefits from use* dependent variable

- There ***is an interaction effect*** between the combinations of {Pricing methods & Target costing non-usage}, {External stakeholders & Current management accounting techniques} and the *lack of knowledge/training* dependent variable

- There ***is an interaction effect*** between the combination of {Pricing methods & Target costing non-usage}, {External stakeholders & management accounting tasks and change} and the *No reason to change the pricing methods* dependent variable

- There ***is an interaction effect*** between the combination of the pricing methods and the target costing non-usage on the *missing targets viewed negatively* dependent variable

- There ***is an interaction effect*** between the combination of the pricing methods and the target costing non-usage on the *lack of systematic methods of incorporating customer input* dependent variable

- There ***is an interaction effect*** between the combination of {Pricing methods & Target costing non-usage}, {Management accounting tasks and change & External stakeholders}, {Management accounting tasks and change & External factors}, {Management accounting tasks and change & Training}, {Decision making & Informal factors} and the *no rewards for achieving targets* dependent variable.

- There ***is an interaction effect*** between the combinations of {Pricing methods & Target costing non-usage}, {Informal factors, Environmental surroundings & Organizational culture} and the *no resources for implementation* dependent variable.

3 Conclusion

The purpose of the study is to point out the institutional factors that affect the application of target costing as an example of modern management accounting techniques.

In this chapter, the researcher describes in detail the main stages of data analysis. The "Statistical Package for Social Sciences -SPSS" is used to analyse the data collected. The purpose of this analysis is to understand the relationship between the variables/factors under investigation.

The source of data is a survey that was distributed in the city of Borg El Arab, Alexandria Governorate. The questionnaire consisted of many statements that were then condensed into the following main themes: External stakeholders, current management accounting techniques, management accounting tasks and perception of management accounting change, coordination & teamwork, external factors, training levels, personal skills, informal/personal

factors, the decision making processes, environmental surroundings, Current pricing methods, the organizational culture, and non-usage of target costing (reasons).

This data is divided into normally/not normally distributed, and then the appropriate statistical test is administered. Each section is followed by a condensed brief summary of the findings.

In order to complement the findings of the statistical analysis, the output of ten interviews is incorporated in the analysis. The next chapter will discuss the interview process and the opinions expressed.

Chapter 9

The Qualitative Analysis

1 Introduction

In the previous chapter, the researcher explained the steps taken to construct the research variables, gather data, decide which statistical analyses to apply, and the production of statistical results.

Triangulation is an approach to data analysis that synthesizes data from multiple sources. Triangulation seeks to quickly examine existing data to strengthen interpretations and improve policy and programs based on the available evidence. By examining information collected by different methods, by different groups and in different populations, findings can be corroborated across data sets, reducing the impact of potential biases that can exist in a single study. Triangulation combines information from quantitative and qualitative studies, incorporates prevention and care program data, and makes use of expert judgment. Triangulation can answer questions on risk groups, program effectiveness, policy and budget planning, and the state of the epidemic in a changing environment. Triangulation methodology provides a powerful tool when a rapid response is needed, or when good data do not exist to answer a specific question. Triangulation can be used when the collection of new data is not feasible or cost-effective(California, 2008)

In this chapter, and to complement the findings of the statistical analysis, the interviews conducted are introduced. To guarantee the consistency and uniformity of the responses, an interview guide is used.

2 The interview

Although always subject to the interfering effects of interviewer bias, both during the interview and the analysis phases, the semi structured interview method used in this research has great potential.

Given that bias can significantly affect the credibility of qualitative data-originated theory building, many preventive steps were undertaken to ensure the control of bias.

2.1 Steps

Pilot interviews

The researcher conducted test interviews with professionals that had similar responsibilities to those of the intended sample. Those respondents were recruited through the MBA program classes held at the researcher's institute.

That helped shape up the researcher's understanding of the respondents' potential reactions to specific questions' wording, length, depth, objectivity, and suitability.

Interview guide

The researcher prepared an elaborate interview guide –with preset neutral questions and queries- to minimize his intrusion, and to guarantee the complete and consistent coverage of the main themes under investigation. The questions stemmed from the institutional theoretical framework along with the output of the mock interviews.

Free response time

At the end of each interview, the respondents were offered –if time permitted- the chance to express their views freely, and elaborate on their experiences while the tape recorder was off, and notes were not taken down. Some very interesting findings were discovered and will be included in the discussion with the proper notification alongside.

Interview audit process

After each interview was conducted, the responses were measured against a list that the researcher had prepared (Miles and Huberman, 1994).

The goal of this process was to ensure that all the themes were covered, and that follow-on actions -if needed- were scheduled.

Only in three occasions was a follow-on telephone call needed, and in one occasion a follow-on interview scheduled.

2.2 The population

There are three main industrial areas in Egypt. Borg El Arab (Alexandria governorate), 6th of October city (greater Cairo), and the 10th of Ramadan city (east of Cairo) According to the latest statistical information published by Egyptian authorities, over 85% of the industrial force in Egypt is distributed between the three industrial zones.

2.2.1 The interview sample

The researcher secured fifteen interviews with professionals in a wide range of organizations representing the major production categories in the Egyptian business world. This was possible through the questionnaire distribution process, professional referrals, and personal contacts.

A telephone call paved the way to each interview. During this call, the researcher explained briefly the purpose of the visit, and the required period to be devoted to the interview.

2.2.2 The Interview meeting

The format of the data collected through the interview process, followed a semi-structured Layout. Therefore, the researcher decided not to use any software to analyze the data, and rather decided to build a matrix-like table.

This approach will enable the reader to see the responses derived from the interviewees, along with the researcher's interpretation of these responses, and compare these responses to each other.

Also, this approach will enable the researcher to break down the feedback into the pre-determined themes and therefore, enable the analysis of each theme individually.

3 The themes

3.1 *Theme (1) General data*

In this theme, the researcher asked general questions about the respondents and their respective organizations. Firstly, a question about the management level is asked. The researcher aimed to interview middle management personnel and higher. The reason was that these respondents will have the appropriate level of experience of the organizations' business and environment (both internal and external). This question was followed with another asking about the years of experience with the respective organization. The goal of this question is to make sure that the years of experience were spent with the organization and therefore enough to gain genuine knowledge and experience about it and its environment. The third question inquired about the level of education each respondent had. It is not strange in Egypt to see management personnel with little education depending solely on experience. The researcher needed to make sure that when definitions like Activity Based Costing, Activity Based Management, Just in Time, and Target Costing are introduced and explained that the respondents will have the proper educational background that would make it easy for them to grasp the concept. Finally, questions about the legal type of the organization and the business that it was in are asked in order to complement the questions that were going to be asked in other themes.

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
What is the legal type of your organization?	I work with different types of companies.	Limited liability organization	Sole proprietorship	Closed Partnership (Joint stock)	Sole proprietorship
What business is your organization in?	Plastics	Heavy duty equipment	Cars (car accessories)	Cars (car accessories)	Recycling (plastics & metals)
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
What is your management level in the organization?	Founder	Middle management	Middle management	Middle management	Middle management
How long have you been with the organization? (in years)	21	7	8	6	7
What qualifications do you have? (educational and/or professional)	M.Sc.	B.Sc.	B.Sc.	B.Sc.	B.Sc.
What is the legal type of your organization?	International Subsidiary	International Subsidiary	Closed Partnership (Joint stock)	Closed Partnership (Joint stock)	Closed Partnership (Joint stock)
What business is your organization in?	Car assembly	Car assembly	Petroleum Products	Textile	Clothing

Table (9.1): General Data.

Comments:

Within this theme, the researcher asked general questions about the interviewees and the organizations they worked within.

Respondents ranged between higher management (2), middle management (9), owner/founder (3), and consultant (1). Years with the organization ranged from 5 to 25 years in the founders/owners' case. Minimum qualification was a bachelor's degree escalating up to a PhD in one instance. Closed partnerships dominated the sample with (9) instances, sole proprietorship (2), limited liability (1), and international subsidiaries (2). The consultant mentioned that he worked with many types of companies even though his main office was in that one organization. All respondents were males between the ages of 30 and 55 years old. The reason for this can be that Borg Al Arab is an out of town area that is some 65 kilometres away from Alexandria. Being that far prevents a lot of female employees from accepting jobs in this area. Also, it was noticed that there is still a tendency to employ and promote males to higher positions. The reason (as more than one respondent stated) is that males are more dependable time-wise, and take fewer vacations than females.

When asked about the criterion used for job advancement and promotions, the general consensus was that it was based on years of experience with the organization. It takes between three to six years for an employee to get promoted from entry to the middle management level. During the after interview chats, more than one interviewee expressed their opinion that personal relations played a great role with either appointment, or promotion to higher positions.

Eighty percent of the respondents with a bachelor degree expressed their intention to acquire, or their enrolment in a Master of Business Administration (MBA) program. It was frequently

mentioned that this qualification is becoming increasingly in demand -even a pre-requisite- for job advancement.

If the respondent was either, the owner, or the founder of the company, their experience exceeded 20 years each. When asked if they thought of selling their businesses, or change their production activities/output/products to move to a more profitable venture, they all expressed their "comfort" with the status quo because (or, even, in spite of) the dire circumstances the Egyptian economy is currently going through. They also expressed their opinion that all their business acquaintances would act in the same manner. That portrays the close relationship between ownership and management in the Egyptian business environment and, perhaps, the unwillingness to pursue alternate business tracks. This should not, in any way, be construed as unwillingness to diversify. This is merely an expression of intention that the "core" business (as one owner articulated it) should be kept intact.

3.2 Theme (2) Applied methods

In this theme the researcher intended to inquire about the management accounting methods applied within the organizations under study. The main goal of this section is to discover whether there was updated management accounting techniques adopted recently.

The first question asks directly about this issue. The manner employed to adopt and apply the newer techniques is queried about in questions two, three, and four. These questions also inquire about the ease with which the new techniques (if any) were introduced, applied, and institutionalized. The following three questions inquire about how 'improvement' is viewed, how easy will it be taken in, what obstacles can be expected, and whether there was a plan for it (improvement) within the organization?

A single question asking about production planning is made. Production planning is a corner stone in the target costing process and therefore, it has to be checked by itself. Finally, the researcher introduced, defined, and explained the concept of target costing. Then a follow up question was asked about whether the respondent thought target costing would be beneficial to his/her organization (that is if target costing was not already applied).

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
How many "updated" cost/management accounting methods have you applied in the last five years? What were they?	- One - Activity Based Costing (slightly adjusted to suit our organization)	- None - The applied methods in our organization are working fine.	- Two - Just in time ordering & Activity Based Costing.	- We are a fairly new organization; therefore our methods are up to date.	- I do not know what you mean by updated. We do (follow) pretty much what everybody else in the business is doing.
If you applied a new method (s), how did you know about it/them?	- Meetings with chamber of commerce fellow members.	- We considered applying a new computerized Accounting Information System, and still assessing it.	- Business relations overseas. - Informal consulting. - MBA programs	- The founders imported the methods from the well established organizations where they used to work	- Nothing new. We have an experienced crew working with us, and they are on top of everything.
How long did it take for the new method(s) to get accepted / established in your organization?	Approx. 6 months	- It might take 6 months to year for application of the new system –if accepted.	- JIT (3months) - ABC (9 months)	- The establishment of the methods took around 6 months until all the 'glitches' were cleared.	- N/A
How did you go about applying the new method(s)? Did you follow any steps or system to apply?	- Asked professional people that applied it how they did it and asked for our management accountants to have a visit with their accountants for discussion.	- N/A	- Explained the new methods to employees during meetings held over the period of approx. a month.	- Employee training	- Our staff was hired with the necessary experience to run the business right away.
How successful do you rate the application of the new method(s) on a scale of 1-5?	4	It has worked for some competitors.	- JIT (2) Cooperation from outside parties not dependable. - ABC (4)	They work fine for us. (4)	- It works fine.
How easy was it/would it be to change/improve the management/cost accounting techniques within the organization?	There will be a tendency to resist change	Not easy especially if the rate of change is fast	In my opinion, change is disruptive and will only lead to un-ease within the organization	Cost accounting in our field depends on set rules that work just fine for everybody.	It should not be very hard, but we prefer to maintain the existing methods as we got used to them.
What types of obstacles/resistance should management expect to face when undertaking the task of MA techniques improvement?	Personnel deliberately sabotaging the data to yield the wrong information.	Cost of application	Management/employee unwillingness to accept new methods, training time, cost of training	New equipment needed (computers for example), cost	Maybe the costs associated with the new application.
Is there a clear plan for improvement in the organization?	I would not call it a plan. Whenever something new	- Plans for expansion in the next 3 years.	- Management ideology supports improvements	Not in the near future. Maybe in 3 or 4 years	- We keep a close eye on our competitors. If a

	comes to our attention, we assess its applicability and benefits, then we decide whether to apply it or not.		when available.	depending on the cost.	method seems to be working with them, we will contemplate applying it in our business.
How far further in time do you plan your production (and subsequently plan costs?)	Quarterly	Bi-weekly	Half-annually	Bi-weekly	Monthly
{After introducing the concept of Target Costing} Do you apply it in any way?	Never introduced	Not TC per-se, Budgeting is what we depend on most of the time.	We apply something similar which is budgeting.	We do apply this concept with a little twist. We check the market prices and competition, and then we build our plans accordingly. Pharmaceutical products in Egypt are not price elastic. In other words, people will buy the medicine if they have to, no matter what the price is.	Budgeting is a well established method in our business (even though, budget over-runs are a natural occurrence). This is the closest method to Target Costing that we apply
If not, how successful/beneficial would the application of such technique be?	We will definitely apply it in the near future.	Provided communication with members of our value chain improve, it will be very beneficial to us.	I can not tell, but I am sure that it is a great idea provided that we get full cooperation from all departments and chain members.	With our line of products, this method might prove beneficial with certain herbal and cosmetic products, but not with the core products that we depend on.	Customers' requirements change drastically and frequently. From what I understood from the explanation of TC, I do not think it would be applicable.
	Respondent 6	**Respondent 7**	**Respondent 8**	**Respondent 9**	**Respondent 10**
How many "updated" cost/management accounting methods have you applied in the last five years? What were they?	- 'Tried' many management methods. - Activity based management; Activity based costing, and Target costing.	Activity Based Costing.	Activity Based Costing	Activity Based Costing	None
If you applied a new method (s), how did you know about it/them?	- Through conferences, academic/professional publications, and peer	- Business acquaintances at other organizations.	Suggested by the multi-national corporations that we work with	- It is the standard (minimum) currently required in our business	N/A

	recommendations.	- The MBA courses that I am attending.		in order to be able to do business with international partners. - Also, I studied it during the MBA program I went through.	
How long did it take for the new method(s) to get accepted / established in your organization?	- In some cases, around 4 months, in other cases about 9 months. No one method was applied without a little 'fine tuning' to suit our needs and capabilities.	- 6 months	9 months for full, error-free application.	Full application took around a year, but I can safely say that 90% application ratio was achieved after 8 months.	N/A
How did you go about applying the new method(s)? Did you follow any steps or system to apply?	- Through a very meticulously designed training schedule in addition to hiring personnel.	- Trained our staff on data gathering, classification, and management. - Trained floor workers to gather and provide data about their processes.	Manuals and training session were offered to our staff by our international business partners.	We had multi-level training sessions held for our employees and workers	N/A
How successful do you rate the application of the new method(s) on a scale of 1-5?	4 When outside factors have to be taken into consideration, the success of the method goes down as we have no control over the outside world and that affects our performance.	4	5	5	N/A
How easy was it/would it be to change/improve the management/cost accounting techniques within the organization?	We consult a lot of businesses, and the biggest obstacle that our recommendations face is resistance to change. People expect us to come up with answers that would not require them to change.	Methods used in our business are simple and the last thing we need is more complex ways to look at things.	If everybody else would adopt the new methods, we will too.	Why would we have to change our methods if they work fine?	Can not see the need to change.
What types of obstacles/resistance should management expect to face when	Acceptance within the organization, cost	Training cost	Should not have any material obstacles. People in my	We should expect and be prepared for a big drop in productivity	Cost

undertaking the task of MA techniques improvement?			organization are very cooperative.	until the new methods settle in.	
Is there a clear plan for improvement in the organization?	- We keep an eye on improvements in both production and management methods that might be beneficial to our business.	- We keep introducing newer methods that we deem beneficial to our organization.	We work closely with our partners and follow their recommendations with management styles and methods.	- We are contemplating the application of TQM and Target Costing.	We work in a very well-established, simple and 'known/predictable' business. No real improvement either in production or management styles or methods will improve our status in the market.
How far further in time do you plan your production (and subsequently plan costs?)	It depends on the type of client and their respective business. In plastics, we do it seasonally (winter, fall, summer, spring)	Half-annually	Half-annually	Quarterly	Weekly
{After introducing the concept of Target Costing} Do you apply it in any way?	Is that not called budgeting? If not, then we budget but not use Target Costing	We have heard about it from our foreign affiliates, but never applied it.	The closest we came to it was budgeting.	We do not apply this method currently, but soon we will decide on a modern method to adopt.	No we do not apply this concept
If not, how successful/beneficial would the application of such technique be?	I do not think it would yield a better outcome than the current budgeting process	This is definitely going to help us -at least- control our inventory levels and the costs associated with it.	It would be beneficial especially that the automotive business in Egypt is booming. It would give a cutting edge against competition until they adopt it too.	I believe it will be very beneficial to us and to the line of business we are in. It will all depend on adoption and success of application. I can say that businesses that will apply it first will enjoy an edge that will not be available to non-applying businesses.	This technique will not add anything to our performance, not because the system is bad, but rather because its goals and benefits do not work with our line of business.
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
How many "updated" cost/management accounting methods have you applied in the last five years? What were they?	ABC	- None - The methods we apply within our organization are up to date.	None	None	- None - Standard cost plus is the applied method within the organization.

If you applied a new method (s), how did you know about it/them?	- Required to apply it by our international mother company. - It was the topic of my masters' degree. I applied it within the company.	- The techniques were dictated by international companies we wanted to do business with. - I am familiar with the techniques through the MBA course I am taking.	N/A	N/A	N/A
How long did it take for the new method(s) to get accepted / established in your organization?	- 6 months to a year. - We have 2 plants different in size, location, and calibre of employees.	- I was not here when the company started, but I was told that these techniques (ABC, production flow management systems, and JIT) took about 9 months for the staff/workers to understand and successfully apply.	The cost management methods applied in the company are working good and are sufficient for our purposes.	- The methods applied are sufficient, and the effort to apply new ones is not cost effective a least in the time being.	N/A
How did you go about applying the new method(s)? Did you follow any steps or system to apply?	I had a meeting with my employees to introduce the method, and then I explained it to the cost accountants and then workers during the empirical phase of my research.	- They were built in the system at start. - Extensive training was administered.	N/A	N/A	N/A
How successful do you rate the application of the new method(s) on a scale of 1-5?	5	5	N/A	N/A	- The current method works fine and is sufficient for our purposes. - The company does not possess the funding or the resources to update its techniques.
How easy was it/would it be to change/improve the management/cost accounting techniques within the organization?	Methods are dictated from the mother company overseas.	Headquarters tell us what reports they need and how they should be prepared. We just follow the instructions.	In our field of business, Cost accounting has been the same for a long time.	We do what everybody does.	It would be very hard to change our methods especially that we went through this process lately, and it took a lot of time, cost and efforts.
What types of	Cost, personnel willingness.	Time to train, cost	Cost and efforts to learn	Cost	Need to hire new

obstacles/resistance should management expect to face when undertaking the task of MA techniques improvement?			and then adopt the new methods.		personnel, cost, and time
Is there a clear plan for improvement in the organization?	- As competition in our field of business grows, more market-driven techniques will be tried and hopefully applied in order to increase (or at least maintain) our market share.	- I hear our partners overseas are testing target costing. If smooth and successful application is achieved, I know they are going to ask us to apply it at our plant.	A production methods plan, but not a cost/ management accounting improvement plan.	- Yes. - In my opinion, competition (local or international) is going to dictate the type and magnitude of improvement needed.	- No plan, but if the need to update arises, then proper actions will be taken.
How far further in time do you plan your production (and subsequently plan costs?)	Quarterly	Quarterly	Quarterly	Seasonally (Winter, Summer)	Seasonally (Winter, Summer)
{After introducing the concept of Target Costing} Do you apply it in any way?	Budgeting is what we use, and it seems to work fine with us.	As I said, we do not, but our foreign partners will tell us all about it.	No	No formal application of the technique.	We apply a very similar technique not as formal as this one.
If not, how successful/beneficial would the application of such technique be?	It might be beneficial. I guess we will have to wait until somebody applies it, and then see if it worked for them.	I guess as long as our partners are trying it, then it must be something worth applying or at least trying.	It would not be applicable in our case as the petroleum field in Egypt is highly regulated. I dare to say that it is a nationally strategic industry that no one should approach.	That depends on the board of directors' opinion. First, somebody will have to introduce and suggest the application.	The technique we apply works for us, so I guess if TC is the formal version of it, then it will add value to our performance and the bottom line.

Table (9.2): Applied methods.

Comments:

Half the respondents stated that Activity Based Costing was the latest management accounting technique they applied. The majority of the remaining respondents stated that their methods are "fairly new and up to date" or that they basically apply what everybody else is applying.

The researcher explained -through numerical examples and prolonged conversations- that activity based costing is an "after the fact" type of management accounting technique and that it helps allocate the costs and not control them.

Sources of knowledge and newer techniques are trade associations, international business associates, consultants, MBA programs, and competitors. *"Sometimes -as one manager revealed- we change our methods be it production or management just to be in sink or be like our competitors or members cf our trade associations"*. For this change to get in full speed, the period needed ranges between four months to year. This long adoption and implementation period sometimes causes a lot of discrepancies that require remedial efforts extremely tedious and costly. This in turn could cause the new program to be dropped and the old traditional methods to be re-used.

When asked about production plans, the periods varied from bi-weekly to half-annually. The most important factors influencing the scheduling process were the type of organization, nature of the product, type of clientele, availability of raw materials, financing, and season.

The researcher introduced the concept of Target Costing and explained its components and requirements. Then, the question whether it was applied in any form or under any name at the respondents' respective organizations was asked. In spite of the elaborate example and the quantitative method used, most respondents replied that they applied budgeting (long and short term). Every respondent, no matter what level he or she were at, expressed their comfort and wide

acceptance of budgeting and mentioned that it would be extremely difficult for their firms to switch away from this management accounting process. To the researcher's surprise, only one respondent actually suggested a hybrid system that combines Target Costing with budgeting. He promised to follow on this idea and communicate it to the researcher, but time constraints and high work loads prevented him from satisfyingly seeing this project through.

3.3 Theme (3) Institutions& Internal synergy

This theme had two parts. The first part took the form of an oral questionnaire. The main reason behind this format was that the researcher needed to observe the respondents' facial expressions and note their hesitations or haste in answering the questions. This part asked about how things were done within the organization. It started by asking about data transparency, then the expected manager's behaviour, then about the R&D department, then the treatment of innovative ideas and initiatives, then about personal/departmental relations. It went on to ask about the spending behaviour and its drivers, then two questions about the 'perception of', the 'resistance', and 'employees' contribution' to change. Finally, it asked about the status of the cost/management accounting department in the organization. The second part consisted of six questions. The first two were about the design department and process. The following two inquired about the communication channels and the formality of these channels. The fifth question asked about whether the organization used an intranet as a mean to communication. The final question inquired about the channels through which rules, regulations, and bylaws are communicated between headquarters and international subsidiaries or branches (in case of multinational companies).

On a scale of 1 →5, where:

(1=strong, 5=weak) or (1=dependable, 5=not-dependable) or (1=fully agree, 5=totally disagree).

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Respondent 12	Respondent 13	Respondent 14	Respondent 15
The organization has a comprehensive and transparent data base/newsletter that guides and informs employees of initiatives and future plans of the organization.	5	4	4	4	3	4	3	4	5	4	5	4	5	5	4
It is always the manager's responsibility to suggest improvements (methods, techniques, material ...Etc…)	1	2	1	2	2	2	2	3	2	1	2	3	5	1	2
The department of Research & development is one of the biggest and respected departments in our organization.	2	1	1	1	5	4	2	4	2	5	3	3	2	3	3
Suggestions for improvement are valued, commended, evaluated, applied, and rewarded.	2	3	2	1	2	3	2	1	2	2	3	3	3	4	2
Collaboration between personnel/departments helps improve the working environment within the organization	3	3	4	2	3	4	5	3	3	4	1	1	4	4	4
Times are tight. Spending should be at its lowest even on R&D.	2	1	3	2	2	2	1	3	5	2	4	4	2	1	1
Little effort has to be exerted to have a new technique accepted and	4	5	3	4	5	4	4	4	3	4	4	4	4	3	5

applied.															
Resistance to change or innovation is at its minimum in our organization.	3	4	3	2	1	3	4	5	4	5	1	2	4	5	3
Employees' opinions are always solicited before, during, and after the introduction of a new technique (especially management accounting techniques)	3	4	5	4	4	4	3	4	3	4	2	2	5	4	4
The Cost/Management Accounting department is well respected within our organization.	1	2	3	4	2	3	2	1	2	1	2	2	2	2	1

Table (9.3): Institutions and internal synergy

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
Do you have a product design department	No	Yes (mostly for packaging designs). We use other producers' products as a guideline to our line of products. Final selling price is the most important factor in the process of choosing what to actually produce)	We have a design department. It is in constant contact with hospitals and medical offices. Its main task is to make the necessary adjustment to the existing and new (imported) equipment to suit the Egyptian environment.	We have a very strong R&D department. No pharmaceutical company can survive without one. Of course, not all the suggested products will be cleared to production because of governmental, financial, and competitive restrictions.	A small department is responsible for the alterations that clients demand. Our products are standard and seldom change.
If not, who designs your products? How?	We do not design; we copy other producers' designs especially from China.	N/A	---	---	---
How are the communication channels between the major departments in your organization?	Good, strong	Very tight and fast	Smooth and fast	Flexible	Very short and fast
How formal/informal are these communication channels?	Very formal (sometimes too formal)	Very formal	Semi-formal	Semi-formal	Closest to informality
Do you have an intranet?	No	No	No	No	No
If you are a multinational organization, how are instructions, rules, bylaws communicated between your organization's parts/branches?	We are not a multinational organization.	N/A	Main designers and producers of medical equipment and spare parts overseas mail us their new catalogues and price lists regularly.	---	We are not a multinational organization.
	Respondent 6	**Respondent 7**	**Respondent 8**	**Respondent 9**	**Respondent 10**
Do you have a product design department	In our business (plastics) yes. Most of my consulting clients do not have formal design sections in their organizations.	Not a design department, but engineering handles any requests the clients might have.	Design is a section of the production department.	Engineering, production, and design are all merged together. This is due to the size of our organization.	No
If not, who designs your products? How?	---	Engineering	It depends on the type of car.	Collabourative efforts between the above	We do not design our products. We produce

			If the car is imported, then we do not have a say in the design of the parts. If the car is produced locally (keep in mind that we do not have a 100% Egyptian designed and made car) , then design can suggest different types/shapes/colours of the part under discussion	mentioned departments.	recycled raw material for other producers to include into their products.
How are the communication channels between the major departments in your organization?	Smooth	Engineering has the upper hand in the internal relationship between departments.	Good	Very fast and efficient. Again due to the size of the organization.	Very fast and efficient
How formal/informal are these communication channels?	Formal	Formal	Formal	Semi-formal	Informal
Do you have an intranet?	No	No, but employees use personal emails, and mobile phone messages to communicate with the factory in case they are off-site.	No	No	No
If you are a multinational organization, how are instructions, rules, bylaws communicated between your organization's parts/branches?	My clients that are subsidiaries to overseas parent companies receive their instructions and rules from headquarters. Whether they are applied as is or altered a little is a totally different story. As long as they can escape auditing, they -pretty much- do whatever they see fit to the environments they operate within.	The main product innovations come from overseas and are sent to us via strict and secured channels. As for bylaws and rules, we devise our own.	We are not a multinational company, but we try to adopt the rules and bylaws adopted in multi-national companies. Then –if new- these rules are communicated to all departments through formal ways (printed memos, and bulletins)	We make our own laws and rules. In case the rules change (they are reviewed every year), then a general memo is distributed to department managers who in turn communicate them to their subordinates.	---
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
Do you have a product design	Not formally	We have a design	Research &	We have a creative	The design department is

department		department for parts that are made in Egypt. Some parts are imported and we just install them into the cars.	Development are more familiar departments in the petroleum business than design. We have a research & Development department	design department	the most important department in our business.
If not, who designs your products? How?	The design section of our business is included in the engineering/production functions. If a product or part needs work, engineers contemplate the possible alterations and then they apply the best option.	---	---	---	---
How are the communication channels between the major departments in your organization?	Smooth	Fast	Very professional	Fast & smooth	Flexible
How formal/informal are these communication channels?	Formal	Formal	Formal	Formal	Informal
Do you have an intranet?	No	No	No	No	No
If you are a multinational organization, how are instructions, rules, bylaws communicated between your organization's parts/branches?	We are not a multi-national organization.	---	Not a multi-national organization.	---	---

Table (3-2): Institutions and internal synergy

Comments:

Intra-communications between organizational levels are not solid. Most respondents mentioned that employees are neither consulted nor properly informed of the major changes in organizations' policies, bylaws, and/or plans. This weakness in communication channels is a major obstacle on the road towards applying management accounting methods that require synergy and internal harmony (i.e. Target Costing)

Managers are looked at as the generators of new ideas. They are expected to come up with improved methods and techniques to better the operation within their departments, then conveying these methods to their subordinates and assistants. In some cases creativity was encouraged, but then met with improper appreciation which led to lower motivation and self esteem.

Research & development (sometimes labelled design) departments (if existent) hold a medium importance amongst other departments. For Target Costing purposes, this constitutes a problem as design is the building block in the whole target costing process.

Employee feedback, suggestions, and innovation are not met with the expected (proper) gratitude. Employees feel that whatever they come up with will be met with indifference/ignorance, and that the status quo will prevail at the end.

There is a general feeling that spending has to be controlled to the greatest limit. Design, research & development activities' budgets are not different than other budgets that have to be cut.

In order to adopt and implement a new technique -be it a production technique or a management accounting technique- tremendous efforts have to exert. Introduction, orientation, and training efforts have to be exercised. Resistance to change is high and everybody seems to be happy with the status quo. More than one respondent mentioned that their hope rests on new blood that joins their organizations. These fresh and young newcomers are expected to be prone to accept change

thus giving the whole organization the flexibility and leniency it needs to compete in the current business environment.

Engineering, production, and -sometimes- R&D departments collabourate in coming up with new product ideas. It is noticed that market needs start mostly within the marketing/sales department, then communicated to the before mentioned ones. Standard costing is applied even though that in many cases, when asked, managers did not know that the method they were applying was called standard costing. The researcher had to define standard costing and then ask again whether it was the method applied within the organization.

Communication channels were mostly formal and smooth. More than one manager mentioned that a piece of paper properly signed is the best way to communicate within the company. The researcher pointed out that with this bureaucratic feature of the internal communication system communications become sluggish and the whole work process slows down tremendously. The reply to this comment was that the security and responsibility definition is the most important feature of the communication system. *"We need to be able to pinpoint the responsible party in case of misconduct, mistakes, or conflict"* said more than one respondent.

As everybody agreed upon, the solution to this problem is the installation of an internal computerized communication system (intranet), but again, resistance to change and cost are the main obstacles that this project faces in most organizations.

3.4 Theme (4) Competition

In this theme, the researcher asked four questions. The goal of this theme is to assess the existence, and intensity of competition within the Egyptian market. The first question inquires about the trend of competition in the organization's line of business. The second inquires about the ease with which a new producer / rival could enter the market. The third question asks about whether there

was free competition in the organization's line of business. The fourth and last question inquired about the costs (if existent) associated with establishing new ventures in the organization's field of business.

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
How do you see the trend of competition in your line of business? (i.e. number of competitors)	Increasing Fast	Food processing is a vast field. Parts of this field is saturated, but the vast majority is seeing very fierce and complicated competition	There is competition in the medical equipment field, but companies are well aware of their current situation and the division of the market. I would not say that the market is saturated, but this line of business is not as attractive as other investments.	Fiercely increasing	The competition is increasing. The construction business in Egypt is booming.
How easy is it for a new producer/rival to get in the market?	Very easy, especially international new-comers.	In Egypt, if you can get the capital, and the right connections, you can get into any business you like.	Easy but not attractive.	Moderately easy.	Relatively easy compared to other types of investment.
Is there free competition in your line of business/production facility area?	Yes	The market is segmented according to the type of products. Some segments have close-to-free competition, and the others have restricted flexibility.	To a great extent, yes.	Free competition, yes. Clean/fair competition, I do not know.	Yes
What are the costs (known /hidden) associated with establishing new ventures in your field of business?	Governmental fees, application fees, legal fees, financing fees.	Insurance fees, Ministry of Health fees, bank charges, "facilitation (informal)" costs, initial investment.	New factory, regulatory fees, raw material, and regular production costs	Governmental fees, taxes, customs, financing fees, then regular production fees.	Establishment formal fees, production facilities, transportation, and taxes.
	Respondent 6	**Respondent 7**	**Respondent 8**	**Respondent 9**	**Respondent 10**
How do you see the trend of	Increasing with our business	Stable	Heavily increasing	Number of competitors	Stable

competition in your line of business? (i.e. number of competitors)	(plastics), and other typed of business that I consult.			is increasing. Competition from overseas countries (especially China) is killing us. Their cost base is much lower than ours.	
How easy is it for a new producer/rival to get in the market?	Easier than it was two decades ago. Demand on plastic products is increasing which makes it a very attractive investment.	Very hard. The big names and makes of heavy equipment control the market and make sure that competition does not increase especially from imported (used) equipment.	Relatively easy as long as they can get a foreign company's account to be their dealer, or a sub-dealer of an existing local dealer.	Easy to a great extent.	Very easy.
Is there free competition in your line of business/production facility area?	Yes	Very limited free competition amongst the existing players. Everybody knows their share and seldom try to alter it.	Yes, to a great extent	Yes	Our line of business (recycling) is not very popular in Egypt (or at least in the Alexandria area). The new government's environmental regulations, and the increase in the use of recycled material in different types of production, might cause this fact to change within the next five to ten years.
What are the costs (known /hidden) associated with establishing new ventures in your field of business?	Regular costs associated with a new business venture establishment. Governmental fees, environmental clearance fees, and production fees.	Regulatory fees, taxes and customs, production and maintenance fees, and power costs.	Governmental fees, service stations costs, production costs, imported raw material (plastics.etc…) costs, and foreign currency costs.	Governmental business establishment fees, facilities costs, and taxes	Machinery, raw material collection, and transportation.
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
How do you see the trend of competition in your line of	Tremendously increasing	Increasing locally and internationally.	Stable	Increasing both locally and internationally.	Increasing

business? (i.e. number of competitors)					
How easy is it for a new producer/rival to get in the market?	Moderately easy provided that they have the proper connections.	Fairly easy	Oil producer, never. Refineries and by-products establishments, very hard.	Relatively easy.	Easy and attractive
Is there free competition in your line of business/production facility area?	Yes	Yes	It is a heavily regulated industry.	To a great extent	Yes
What are the costs (known /hidden) associated with establishing new ventures in your field of business?	Governmental fees, production costs (machinery, tooling), and taxes.	Formal regulatory costs, raw material, finance charges.	Extremely preventive costs. Only large conglomerates can withstand the costs associated with this type of business.	Governmental fees, taxes, customs, foreign-currency associated costs, and initial production costs.	Regulatory fees, production facility costs, raw material, finance charges, and customs.

Table (9.4): Competition.

Comments:

With the exception of three managers that affirmed the stability of competition levels, all respondents confirmed, to different levels of severity, that competition is becoming fierce with time. This competition is not always local, but most are facing increasing international competition too. Egypt entered the free trade treaty in the early 2000's, and therefore does not have the ability to levy prohibiting customs on imported goods as it used to be able to.

Merchants go to China and import cheap (not always up to quality specs.) products. This trend hinders local/national industries. The imported products -even though having to incur taxes and customs- are still cheaper than the local/national counterparts. Traders go after the fast and easy profit with no regard to the overall benefit. The Egyptian market is very price sensitive. Quality comes after price in the customers' criterion in a lot of cases.

If they have the proper connections with the right people, businessmen will have less obstacles in establishing their new businesses. In one instance, a pharmaceutical company manager mentioned that pressures from international pharmaceutical companies on the government caused the later to issue preventive regulations in order to stop the local production of a certain drug to prevent the decrease in its imports.

Regardless of the government interference in regulations (legal/environmental ...Etc...), most respondents agreed that there exists free competition in their respective fields of production. The interesting responses were those stating that the market was saturated and/or full. This conveyed the respondents' ignorance of the risks associated with competition finding markets niches and using them to win market share.

Borg Al Arab area is a new industrial zone where new organizations enjoy preferred tax treatment for a certain period of time. This treatment/exemption was instituted by the government to

encourage businessmen to establish their businesses in this geographical area. In spite of the previous fact, not all respondents were ready to disclose the "hidden" costs associated with the establishment/running of their respective types of business. After turning off the tape recorder, the great majority of the managers interviewed asserted that in order to get your business established, especially with the governmental bodies (power authorities, customs. Etc…), certain "un-official" fees had to be incurred. Their problem with these fees was how to present them on the books as tax-deductible expenses. These costs were un-avoidable, and yet very hard to record.

3.5 Theme (5) the surrounding environment & the market

The market and the external environment surrounding the organization were inspected through the nine questions that this theme consisted of. The questions start by asking about importance of gathering market data, then, about the frequency at which the organization gathers market data and availability and dependability of such data. Whether market data is gathered formally is inquired about in the next question. The following two questions inquire about who demands market data, why, and, how is it processed. The final two questions tackled the outside forces, and the government regulation influencing the organization.

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
How important is it in your organization to gather market data (very, moderate, low)?	Moderate	Extremely high	Moderate	Extremely important	Moderate
How available/dependable are the results of market research studies in relation to your business?	Rare	Informal data gathering	Very much available	No formal sales research is available. Product research is widely available.	Only formal/governmental statistical information is available. No private studies are administered.
Do you gather market data regularly?	Yes	Yes	Yes	Yes	Yes
Do you gather market data formally?	No	No	No	No	No
How is this data processed? By whom?	Informally during board-of-directors meetings	During regular department meetings	During special departmental meetings	During regular departmental meetings	Taken in consideration during product production planning by heads of engineering and customization departments.
Which department demands market data in the organization?	Production	Production and marketing	The design department	Research and Development.	Customization & Engineering.
How would you describe customers in Egypt now? (Smarter, easily influenced...etc…)	Becoming increasingly educated about products, and more demanding. Extremely price sensitive	Very price sensitive, and pickier.	More demanding	Price oriented	More educated and well aware of their options.
If asked, what reservations/doubts would you have about the environment (business/social) and its influence on your organization's performance?	Unclear regulations (production, environmental, tax, customs)	Even though customers are becoming more aware of competition, they still can be easily manipulated through advertising.	Customers in Egypt are easily influenced and roomer oriented.	In our type of business, it all depends on customer relations. Our customers are doctors, medical offices, hospitals, and pharmacies. It all falls on the shoulders of sales representatives and their ability of convince customers to switch to our products through promotional incentives.	Customers constantly change their minds, and do not abide to contracts. We are supposed to accommodate their needs on very short notices (if any)
Government regulations are clear	No	To a limited extent.	Partly	Slightly	No

and help stabilize your business

	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10
How important is it in your organization to gather market data (very, moderate, low)?	Moderate	Very important	Very important	Very important	Low
How available/dependable are the results of market research studies in relation to your business?	We get our information during our association meetings and through our dealers/distributors.	Informal data collection output is readily available.	There is a statistics governmental body that produces statistical information pertaining to business in Egypt. We collect business specific data through association meetings, and dealers.	International data is more dependable than its local counterpart. The market shows competitors plans and customers requirements, but that lacks the timeliness needed for efficient decision making.	None
Do you gather market data regularly?	Yes	Yes	Yes	Yes	No
Do you gather market data formally?	No	Sometimes	To a certain extent	No	No
How is this data processed? By whom?	Data is used to decide on new products and for production planning.	By the engineering department in order to match customers' requirements.	Data is used by both engineering and production for product decision making purposes. Marketing uses this data to set strategies suitable for the market status.	Engineering, production, and design departments use this information to predict the market trend and plan accordingly.	New productions methods adopted by our customers do not influence our production methods, therefore the need for this data is minimal.
Which department demands market data in the organization?	Design department	Engineering & Sales	Marketing, engineering, and production.	Design, engineering, production, and marketing.	Production (sometimes)
How would you describe customers in Egypt now? (Smarter, easily influenced...etc…)	Focus on price. Quality comes in the second degree.	Very competitive. Their decisions depend heavily on price.	More educated decisions, and ***better*** informed (though not ***well*** informed)	Increasingly needy and fussy (these were the exact words of the respondent)	Becoming more technology oriented.
If asked, what reservations/doubts would you have about the environment (business/social) and its influence on your organization's	The business environment in Egypt has a lot of ground to cover before it becomes a world class competitive environment. Education and	Business depends on roomers, word of mouth, and informal personal communications.	Heavily dependent on informal/un-dependable information.	Customers can be easily misinformed hence demanding inadequate specifications.	Environmental awareness has room for improvement.

performance?	training are not up to the proper level needed yet.				
Government regulations are clear and help stabilize your business	Minimally	To a little extent –if any.	Moderately	Moderately	Yes
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
How important is it in your organization to gather market data (very, moderate, low)?	Extremely important	Extremely important	Low	Very important	Extremely important
How available/dependable are the results of market research studies in relation to your business?	Available, but have to be complemented by informal means to collect data about the market.	Surprisingly, market research that we depend on is produced overseas. International car manufacturers run these tests on the Egyptian market to asses the investment opportunities.	Highly available through government bodies	Market status is very important, but research is very expensive. We gather information through different means.	Market research is available through informal means. It is very expensive to get specific market research done for us. Income does not allow it.
Do you gather market data regularly?	Yes	Yes	Yes	Yes	Yes
Do you gather market data formally?	Yes, to a great extent	Data is provided to us through other researchers and not our own efforts.	Yes	Less than 10% of the time.	No
How is this data processed? By whom?	Data is used to decide on the production plan for the coming period. Data is used by both the engineering and production departments.	This data is used to devise marketing and production strategies.	Data is processed by regulatory bodies (ministry of petroleum resources).	Data is processed by both marketing and production. The goal is to reach plans that would increase our market share and increase profits.	Data is processed by the design and marketing departments
Which department demands market data in the organization?	Engineering, Marketing, and Production	Marketing, and engineering	Production	Marketing and production	Design and marketing
How would you describe customers in Egypt now? (Smarter, easily influenced...etc…)	Smarter when it comes to make choices, but easily influenced by promotional stimuli.	Better informed and educated. Extremely price sensitive.	Increasingly wary of government pricing strategies	Customers have a wider range of products/producers both local and international. This led to them being more informed and price sensitive.	The communication boom allowed customers to see the world as their big shop. Therefore, they started demanding styles and quality resembling foreign ones.

					Customers are becoming increasingly well educated, though they are still price sensitive.
If asked, what reservations/doubts would you have about the environment (business/social) and its influence on your organization's performance?	The infrastructure (roads..Etc…) in Egypt is not that dependable and not well built. That in turn influences the performance of cars. Customers become furious when they have to visit repair shops or our dealerships and for having to pay the cost of that high maintenance.	With cars becoming more expensive, the financial institutions started plans to help customers –that can not afford these high prices- buy their vehicles. My concern is that customers are not well aware of the consequences of not being able to serve that debt which may lead to a lot of problems in the future.	Fuel prices are heavily subsidized by the government. This under-representation of the real prices will lead to a lot of problems in the future if not managed well.	Importing from overseas (especially China) hurts national products. It is not fair to compete against this giant.	Agriculture in Egypt does not receive the attention it deserves. Cotton (Egypt most valuable agricultural product) is becoming lower and lower. This will affect the edge that we have when it comes to exports.
Government regulations are clear and help stabilize your business	To a certain extent	To a limited extent	Yes	No	To a limited extent

Table (9.5): The surrounding environment

Comments:

Production/engineering departments surpassed other departments in resource allocation, and dictated which data is needed and how it is used (as opposed to receiving this data from the marketing/sales department).

The majority of respondents mentioned that market data was moderately to highly important for the production scheduling, logistics, material & parts procurement, and inventory functions within their respective organizations.

Most respondents did not gather formal market data. The reason being that it was expensive, and that data was available through informal, less-expensive methods. Trade associations' meetings are the main source of data used for scheduling and production purposes. The Egyptian Central Agency for Public Mobilization and Statistics supplies an abundant amount of data, but the usefulness of this data for marketing and production purposes is questionable. The government does not gather market data systematically, and even if it did, the output lacks specific bits and pieces that will require more data gathering. In short, data gathered by the government can not be depended upon for serious business purposes.

Independent market research entities are increasing both in number and in capabilities. Cost is a minor drawback here. Organizations still do not have full faith in the usefulness and real value of market data, and consequently are reluctant to allocate funds to market data gathering. It was noticed through the interviews that managers' "perceived personal knowledge/experience" of the Egyptian market dominated other ways to collect market data.

The main departments that demanded market data were Engineering, production, marketing, and in one instance each, research and development, and the design department.

The outcome of market data analysis (that is - provided that market data was gathered systematically, formally and professionally), is mostly discussed during department meetings, or board of directors' meetings in preparation for new production scheduling or main upgrades in the line of products.

One respondent in particular had a very interesting reply when asked about the Egyptian customers. He said that "Egyptian customers now take more educated decisions, and ***better*** informed (though not ***well*** informed)". When asked to clarify, he said that the market has gone a long way from being restrained, controlled, and limited under the administration of President Nasser (communism era), to its present position. This evolution -so to speak- started during the administration of President Sadat, and intensified during Mubarak's period. The implications on the customers/clients were huge. Instead of being told that this was the price, and that, that was the quality available, currently, they have a much wider variety and better buying power (even though a lot of people would argue against that). Over all, the Egyptian market still has a way to go before it matures.

Nevertheless, price is still the dominant factor in the decision making process. Other factors ranged between quality, services, and availability.

When it comes to the environment surrounding the organization and as far as the government is concerned, respondents expressed their unease with the way the government managed the private investment in Egypt. A lot of restricting regulations, a lot of conflicting rules and bylaws, and un-thoroughly researched decisions were the main fears in the minds of businessmen.

Jokingly, one manager said *"customers in Egypt take the saying 'the customer is always right' literally"*. There will be a binding contract, and clearly stated terms, rights, and responsibilities,

but that will not restrict clients from making last minute changes in quantities, dates, and/or quality. Again, personal relations allow for such behaviour.

A major problem that is abundant in the Egyptian market is that there is an unexplained shortage in liquidity. *"Everybody owes everybody money"*, *"nobody pays what they owe"* as one manager articulated. This huge deficit between businesses leads to an increasing level of debt, which in turn threatens the continuity of many small to mid-size businesses. The government is one of the major debtors and mostly finances its debt through treasury bonds.

3.6 Theme (6) the value chain

Only three questions were asked under this theme. The main goal was to assess the strength of the relationship between the organization and the members of its value chain. Firstly, a question about whether the organization discussed its production plans with its suppliers. Then, about whether it discussed them with its agents and distributors (the other end of the value chain). Finally, respondents were asked to rate the degree of trust between their organizations and the members of their respective value chain.

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
Do you discuss your production plans with your suppliers?	No	No	No	No	No
Do you discuss your production plans with your agents/distributors?	Sometimes	Most of the times	We own the distribution part of the business, therefore they know all about the company's plans.	Production plans, yes, New medicines/products, not until they are produced and ready for distribution (unless they require special advertising or promotion)	Yes, all the time. We get most of the market data from them anyway.
Please rate the degree of trust (out of 10 for example) that you have in the members of your value chain. In other words, how reliable/trustworthy are the organization's external links in the value chain? (Suppliers, agents, customers)?	If you say trust meaning dependability, then suppliers are an 8, agents are also an 8.	Secrecy is a very important issue in our line of work. They can be trustworthy, but we can not take any chances.	Delivery and quality are a 7, trustworthiness is a 4.	At the risk of sounding very harsh, I would say that we can not trust anybody.	If you dealt with Egyptians before, then you would know how much they love to talk? Privacy is not a respected issue here.
	Respondent 6	**Respondent 7**	**Respondent 8**	**Respondent 9**	**Respondent 10**
Do you discuss your production plans with your suppliers?	Tried to convince my clients to do so. Never successful.	No	No	No	No
Do you discuss your production plans with your agents/distributors?	We do not have to. Creativity is minimal in our line of work, therefore, we have a pretty-much standard line of products.	Most of the time.	Always. 99% of the market data is acquired through them and they produce valuable advice about the market needs.	Always. They give us a feel of the market and its direction.	Do not have to. In our line of work, this is not necessary.

Please rate the degree of trust (out of 10 for example) that you have in the members of your value chain. In other words, how reliable/trustworthy are the organization's external links in the value chain? (Suppliers, agents, customers)?	It depends on the type of industry, client, and the situation.	The government is undependable (although it started to stabilize lately). Members of the value chain get an 8.	7.5	Between 7 and 9.	Suppliers (scrap vendors) are very reliable (10), distributors and customers are very well known and we have solid relations with them.
	Respondent 11	**Respondent 12**	**Respondent 13**	**Respondent 14**	**Respondent 15**
Do you discuss your production plans with your suppliers?	No	No	No	No	No
Do you discuss your production plans with your agents/distributors?	Competition is fierce. We need to obtain as much info about the market and competition as possible, and who better to provide this information than the people that have to go through the market day in and day out.	Their input is crucial in building our plans.	Even though we are a closed partnership, we still get production directions from a governmental agency that more or less controls oil production in Egypt	We do not "discuss" our plans per se, but we hold regular meetings with them to get a general feel of the competition.	We have an integrated production/marketing/distribution chain.
Please rate the degree of trust (out of 10 for example) that you have in the members of your value chain. In other words, how reliable/trustworthy are the organization's external links in the value chain? (Suppliers, agents, customers)?	7 overall	Timing is not dependable as most of our supplies come from overseas. Quality is standard. I would give them a 7.	N/A	8	Customers are very dependable (and predictable). Egypt is a very price sensitive market. Local suppliers are not that dependable (timing and quality), foreign suppliers are better.

Table (9.6): The value chain.

Comments:

There was a unanimous agreement from respondents that they would not discuss their plans with their suppliers. The lack of trust, privacy, and security was the main reason why respondents would not consult or discuss their plans with their suppliers. One automotive manager said "*Egyptians tend to talk a lot. The concept of privacy and/or security is not respected." Therefore, we would be risking that our competitors will know our plans if we discuss them with outsiders –including suppliers*".

Another reason for not including suppliers in the process is that they are ready to accommodate organizations' needs as quick as possible. In other words, if design engineers come up with a newer design, suppliers would be able to willing to change their productions plans swiftly in order to win the business.

Agents and distributors -on the other hand- are the main source of market data. Marketing research is a booming field currently in Egypt, but previously, it was the sales department's duty to gather, organize, and analyze market data and subsequently, submitting reports and making sales plans.

As far as production plans are concerned, agents' contribution is limited to furnishing data about the market. It is, then, the duty of the 'internal' production and marketing (if not called sales) departments to set production schedules including types and quantities.

Value chain members (Suppliers, agents, customers) have their distinctive characteristics. For example, customers are price sensitive, agents always demand discounts, and suppliers always push for larger quantities/orders. Organizations can always count on these features to be true. One respondent differentiated between trust and dependability. The researcher used this differentiation in succeeding interviews. When brought up, most respondents mentioned

that suppliers and agents are dependable, especially that most of the businesses control this end of the value chain. As far as trust is concerned, the first comment stands. The researcher was met with scepticism, let alone, sarcasm, when he introduced the idea of formally incorporating value-chain members into internal planning. *"We can give them (suppliers and agents) finalized schedules, as close as possible to production dates, but this is as far as we are willing to go with this issue".*

4 Conclusion

In this chapter the researcher discussed the different themes used in the qualitative section of the research. The six themes over which the interviews were structured/partitioned were exhibited. After each theme, a 'comments' section verbalised the contents of the tables.

In the following chapter, the researcher will attempt to combine the results of both the statistical and the qualitative parts of the research, draw the conclusion, and reach the research recommendations.

Chapter 10

Discussion

1 Introduction

The application of newer managerial accounting techniques in any organization can be considered as a response to pressures for economic efficiency, strengthened competitiveness, and social change. In many countries, the increasing level of competition (both locally and internationally) dictates the application of more up-to-date methods that will enable organizations to increase their competitive capabilities. This application can not occur in isolation of the social and/or institutional environment prevailing in the specific society within which the methods are to be applied.

In other words, organizations are entities constrained by institutional/social obligations that have to be taken into consideration if/when a new rule is injected into their system.

In the previous two chapters, the researcher compiled data -both quantitative and qualitative- to use as a basis for deciphering the institutional factors that could affect the application of Target Costing -as an example of modern management accounting techniques- in Egypt.

Yin (1994) said, "*By combining multiple observers, theories, methods, and empirical materials, researchers can hope to overcome the weakness or intrinsic biases and the problems that come from single method, single-observer, and single-theory studies*".

During the process of analysing and relating both types of data (quantitative and qualitative), the researcher had to go back and informally contact some of the interview respondents to clarify some ambiguous points. This way, the researcher insured the application of a satisfactory level of triangulation between the research methods.

2 The analysis

2.1 Factors that influence the application of target costing

Some of the institutional factors that were found to statistically affect the application of Target Costing are; coordination and teamwork, external factors, level of training, and organizational culture.

2.1.1 Coordination & teamwork:

According to the literature visited, target costing is a team-dependent technique. Target costing will not bear the fruits expected from its application if the organization lacks the proper coordination between its departments and if it (the organization) does not enjoy a solid teamwork attitude.

According to (Swenson et al., 2003), one of the key principles for the proper application of target costing is 'cross functional involvement' where cross-functional product and process teams are responsible for the entire product from initial concept through final production.

During the interviews, many respondents expressed their concern that their organizations do not enjoy a good teamwork spirit. They anticipated also that not only them suffered from this weakness, but also most of the organizations working in Egypt. The only exception to this problem was the multinational organizations doing business in Egypt. These organizations come with a different mindset and only employ or hire candidates that share this same value with them. Good examples of these organizations given by more than one interviewee were Mc. Donald's, Unilever, and Orascom. Some of these organizations are not manufacturing companies, but it is the spirit of teamwork that drew attention to them.

2.1.2 External factors:

External factors statistically proved to be significant in affecting the application of target costing as an example of modern management accounting techniques. External factors include suppliers, agents, infrastructure, clients, buyers...Etc…

As previously mentioned in the target costing literature chapter, this technique integrates all members of the value chain into it (the technique). According to Swenson, Ansari et al. (2003), value chain involvement where all members of the value chain –i.e. suppliers, distributors, service providers and customers- is crucial to the target costing process.

The interviewees spent a lot of time during the free response time elaborating (even attacking) this notion. Most of them were sceptical (to say the least) of the suitability of the external factors -prevalent in Egypt- for the application of target costing. None of the respondents had any trust in the suppliers' delivery time either due to their inefficiency, or due to the lack of proper finance/management. Furthermore, almost all of the interviewees depending on local/national suppliers expressed their refusal to trust them with their production plan. The concept of privacy and private information is not valued in the business environment in Egypt. All respondents were certain that their suppliers will either willingly or unwillingly disclose their plans to rivals, competitors, or even other suppliers. The secretive nature of people/businesses discussed in Youssef (2007) was extremely vivid when this point was discussed.

While most respondents agreed that there were major improvement in the infrastructure in the Egypt, they concluded that there is still a long way to go before this infrastructure can be trusted and depended on.

2.1.3 Level of training:

The level of training also proved to be statistically influential on the application of target costing. Most managers expressed their distrust or scepticism about the value that fresh graduates receive or acquire from colleges. They expressed their need for an entry level candidate that is more in tune with the business world. On a parallel note, the researcher noticed that business schools in Egyptian colleges are starting to promote new courses emphasising 'market' orientation, and 'practical' concentration.

Middle managers are more inclined towards hiring personnel with two or three years of experience, preferably with an MBA degree. These employees are trusted to have applied experience as opposed to academic knowledge. The unemployment rate is currently high in Egypt. There is abundance of potential candidates available for work depending on college reputation, academic achievement, and experience.

Budgets and validity are among the main factors influencing training in Egypt. Businesses are going through tough times and cuts have to be made. Also, the validity and value of training are distrusted except (again) in multi national organization who, on the other hand, have regular training and advancement programs.

2.1.4 Organizational culture:

The researcher was not surprised to see that the organizational culture did indeed have a statistical influence on the application of target costing in Egypt.

The status quo in running a business is the prevalent ideology in managing that business. That was apparent in the work of Youssef (2003) who mentioned that Egyptian businesses were -and still are- run with the mentality that was common during the socialist era (1952-1970). During this period (the Nasser period), the state governed and imposed a certain management philosophy over the business world in Egypt. A unified

financial accounting, performance measurement, and management systems were not to be disregarded or not applied.

Interviewees attested that this mentality is still in power, and dominates the mindsets of managers in Egypt. They all ascertained that if this philosophy does not change, that the application of newer techniques (be it management, accounting, cost, production) will be unsuccessful.

This mentality is not applied in multi national companies in Egypt. These organizations enjoy fresh and up-to-date business mentalities that are new to the Egyptian state of mind. Some managers were conservative as to the applicability and acceptability of these 'fresh' methods in the Egyptian environment. Others were optimistic, and mentioned that the process of change has to overcome hurdles and obstacles. Change is perceived to be the language that all business ventures have to speak now.

2.2 Factors that do not influence the application of target costing

Some of the institutional factors that were not found to statistically affect the application of Target Costing are; management accounting tasks and perception of change, personal skills, external stakeholders, current management accounting techniques, informal/personal factors, the decision making process, the environmental surroundings, and pricing methods.

Surprisingly, the *perception cf change* did not prove to statistically influence the application of target costing as a newer management accounting technique. During the interviews, the researcher was under the impression that applying new methods was going to be faced with a great deal of resistance. Interviewees (especially from lower management levels) expressed their concern that the application of any new technique -

no matter in which field-, would cause a lot of problems and would take a lot of time until it 'settles' or in other words until it is institutionalised. More than one respondent expressed their concern that the introduction of newer 'modern' methods was not going to be easily accepted by employees. This is in line with what was discussed earlier about the prevalence of the status quo. Furthermore, respondents mentioned that there was a deficiency in the intra-communication channels between organizational levels. Employees are not consulted before the new method is introduced. They are also not properly informed of the benefits that a new system would help them achieve.

The remaining variables proved to have no effect on the application of target costing. *Personal skills* are of no statistical effect on the application of target costing. The technique definitely needs training, and a considerable period of time until it is properly understood, applied, and become fruitful. Most respondents mentioned that Egyptians enjoy a tremendous ability to adapt, but the main problem will be to get them to accept the new method to start with.

External stakeholders, have no say in what techniques are applied within the company. It is not until the organization tries to apply the technique on those external parties that problems start to appear. The success of integration between the organization and the members of its value chain is extremely doubted. As the interviews showed, 100% of the respondents mentioned that they would not share their production plans with their suppliers. From a legitimacy point of view, external stakeholders should not have an effect on the application of newer techniques. Most modern techniques become widespread through meetings, professional gatherings, business relations... etc... this should not be perceived as applying any pressure on any one organization to adopt the

technique. The only exception to this rule is multinational organizations. These organizations -as mentioned before- come to Egypt with a wider mind and acceptance of change and development. Even though the change they accept comes mainly from overseas (where their headquarters are located), it should still be looked at as change imposed on the organization by external stakeholders.

Current management accounting techniques do not have a statistical effect on the application of target costing as a newer management accounting technique. Standard costing and budgeting prevail over other techniques. Activity based costing is gaining widespread acceptance. The researcher noticed that most respondents confused budgeting with target costing. He had to explain the differences between the two techniques once in the beginning of the interview and more than once during the sessions.

Informal/personal factors did not prove to have a statistical influence on the application of target costing. The only explanation the researcher could deduce from the responses he received was the general feeling among employees that management does not 'care' what they thought. People were reluctant to propose any new ideas. Their explanation was that they will either not get the recognition they deserve, or that their ideas will be filed with no actual action taken towards applying them. Two respondents expressed their fear that their managers/superiors will get credit for their ideas because they (the managers) have the right connections. This picture was a little different within multi-national companies. These organizations enjoy an appreciative, teamwork environment that encourages personnel to be creative (a trait essential for the application of target costing).

The *decision making* process also did not statistically affect the application of target costing. Decisions in Egyptian organizations follow a top down systematic pattern. The

board of directors and top management impose their decisions on the lower levels of management and the workers. In the questionnaire, a question was asked about whether the manager was supposed to follow up of the execution of plans and come up with new ideas. Interview respondents confirmed that that was the mentality within Egyptian organizations. "*No one takes the initiative or comes forward with ideas or suggestions to better peiformance or even improve work conditions*" one top manager said. Some respondents were surprised (even agitated) when the researcher told them that in a Toyota factory for example, any one worker can stop the production line if he/she noticed something wrong, or thought of a better way to perform the simplest of tasks. The management environment/ideology is not as welcoming -if at all- as it should be to creativity and initiative.

Statistically, *environmental surroundings* do not affect the application of target costing a newer management accounting technique. Interviewees mentioned that as long as target costing is an internal process that starts at the design stage and follows on the product initiation and actual production stages that it was only logical for it not to be influenced by the external environmental surroundings.

Finally, *pricing methods* do not affect the application of target costing. As mentioned before, standard costing prevails in the Egyptian business world. The researcher noticed that because of the increase in competition, and the introduction of low cost products especially imported from China, the trend is turning towards a more market-oriented pricing frame of mind. Currently, and while pricing their products, managers take into consideration the price they think the market will perceive as acceptable. This in itself is the building block or the starting point at which target costing sets off.

2.3 *Interaction effects:*

While testing for any interaction effect between the independent variables as a unit and the dependent variables, the researcher found the following:

There is an interaction effect between the combination of 'external stakeholders' and 'current management accounting techniques' on the "*lack of familiarity*" dependent variable. This is in line with the previous discussion that mentioned that most businesses in Egypt are happy with the status quo. The ease business functions are carried on with and the 'comfort' (as one interviewee expressed) with the already applied methods leads to people's reluctance to explore new venues and therefore leads to the lack of familiarity of newer techniques.

Also, there is an interaction effect between the combination of 'informal factors' and 'environmental surroundings' on the perception that 'target costing is a passing fad'. The only explanation the researcher could find after cooperating with interviewees was that target costing is confused with budgeting (as a planning / control management accounting technique). Budgeting has been used as a planning method for a much extended period of time. It is considered to be the normal technique used by management/cost accountants.

Furthermore, it was also found that there were an interaction effect between the individual combinations of 'Personal skills & Informal factors', 'Informal factors & Decision making', 'Personal skills & Environmental surroundings', 'Personal skills, informal factors & Environmental surroundings, 'Decision making & 'environmental surroundings', 'Personal skills' & 'Organizational culture', 'Personal skills, informal factors & organizational culture' and the dependent variable 'no top management support'. Except for multi-national organizations working in Egypt

2.4 Demographics:

86% of the questionnaire respondents were male and 14% were female. Interviewees were all male. It was interesting to investigate whether there would be a difference between male/female opinions as far as the constructs are concerned.

Statistically, there was a significant difference of opinion between males and females in the following constructs; coordination and teamwork, organizational culture, current MA techniques, informal factors, and environmental surroundings.

In other words, males and females did not share the same opinions as to whether coordination and teamwork, organizational culture, current MA techniques, informal factors, and environmental surroundings would have an effect on the application of target costing as a newer management accounting technique in Egypt.

On the other hand, males and females had no significant difference in opinion concerning the following constructs; Management accounting tasks and perception of change, the external factors, the level of training, and personal skills.

2.5 Competitive regulations

According to Ghoneim (2002), given the limited resources available to the Egyptian economy, the government of Egypt should opt for a first best approach by eliminating the barriers that negatively affect competition in various goods and services markets.

Hence, it should embark on a serious trade liberalization policy regarding tradable goods and should work on removing existing barriers to FDI in services and other non tradable sectors. Finally, it should continue creating sectoral regulations that fit the nature of each sector if some sort of competition rules need to be clear for the players in that particular field especially in the area of services and non-tradable where absence of a competition law is a major deficiency. This view is challenged by some experts who fear from the

substitution of a comprehensive law by sectoral regulations that are likely, from their point of view to create more uncertainty and inconsistency in the application of laws (see for example, Fels, 2001, p. 16).

If Egypt should go for the second best approach of the necessity of having a competition law for example as a result of the external pressures that pushes Egypt to adopt a competition law Among the most important pressures are its regional agreements with other partners (e.g. EU Mediterranean Partnership Agreement and the COMESA) which call for harmonization of national competition laws.

, then the design of such law should follow certain principles:

2.5.1 Simplicity:

As asserted by some institutional economists, the developing countries in general have a different institutional setup from that of a developed nation. For example, there is a higher cost of public funds due to an inefficient tax system, a higher cost of auditing and control due to a lack of human and financial resources, lower transaction costs of side contracting due to less control, greater family ties or traditions, weak technical knowledge, and greater asymmetries of information (Laffonat, 2000; Islam, 2002). This leads to the necessity of adopting some sort of competition law that fits in general with the overall institutional environment prevailing in Egypt and does not necessarily follow the competition law of the major trading partner as has been asserted in a general context by some economists. The law should concentrate on few issues that are likely to face a transitional economy like Egypt like horizontal integration. With respect to most other practices that may be of concern (e.g. vertical restraints, actions by dominant firms, and mergers), apparent restrictions on competition may be justified on efficiency grounds.

(see Hoekman, 1997). Most laws therefore allow competition agencies to make judgments in such cases following a so called "rule of reason" approach. Hence, in the Egyptian case, the law should concentrate on horizontal restraints to competition.

In addition and in light of the human resources constraints the competition authority may want to focus its efforts on issues as cartels and exclusive supply or distributional contracts. Other issues such as price discrimination, predatory pricing or complex vertical restraint cases are more complicated and less critical. (For a similar argument in a general context of developing countries see World Bank, 2001, p. 141-142)

2.5.2 Progressivity

The communication from Trinidad and Tobago contributed to the Working Group on the Interaction between Trade and Competition Policy in 2001 has identified a clever feature for introducing competition laws in developing economies, mainly progressivity. Progressivity refers to the approach or methodology in developing and implementing a competition regime. It allows for gradual and selective introduction of instruments to control anti-competitive behaviour. This allows the authority, other government departments and stakeholders the time to accommodate and adjust to the changes that are required. Further, as the economy develops, the regime matures; the instruments could be deepened in this approach. Progressivity is particularly important as it allows a country time to build a firm foundation for the competition regime by fully assimilating one aspect of competition rules before progressing to the next.

2.5.3 Independence of the Competition Authority and its role in Policy Advocacy

To ensure effectiveness of the competition law, the competition authority must enjoy independency and shielding from political and other vested interests' influence (for a

similar argument see World Bank, 2001). In the case of Egypt, the case is not clear as the law has asserted the independency of the competition authority where the head is appointed by the Prime Minister. However, the authority is likely to follow the Minister of Trade and Supply which contradicts with its independency as a separate body. Despite the fact that other countries follow in many cases the same procedures (see WTO, 1999), where they emphasize the independency of their competition authorities and in the same time they follow different ministries, the case of Egypt asserts that this is not likely to be the case as the law has given the concerned Minister certain responsibilities to undertake. This means in practice that the authority is not independent and is not shielded from political influence. A major factor that is likely to affect the transparency and predictability of this authority.

Most of the competition agencies in countries with competition legislation are engaged in competition advocacy. A case that has been mentioned with no emphasis in the Egyptian draft law (even there is no complete article that is devoted to this issue). The absence of emphasizing this role complemented by the expected weak independency of the competition authority is not likely to yield positive results. Hence strengthening those provisions are crucial for enhancing the role of competition authority. A proactive stance should be adopted by the Competition Authority to promote competition by attacking not only infringements of the law but also institutional arrangements and public policies that interfere with the appropriate functioning of markets (for a similar argument see World Bank and OECD, 1998, p. 8; OECD, 1994, p. 40). Moreover, through competition advocacy the competition authority can influence government policies by proposing alternatives that would be less determinable to economic efficiency and consumer

welfare. It can serve as a buttress against lobbying and economic rent seeking behaviour by various interest groups. And it can foster greater accountability and transparency in government economic decision-making and promote sound economic management and business principles in both the public and private sectors (World Bank and OECD, 1998, p. 93).

2.5.4 Building the required information database:

The importance of strengthening capacity to collect and analyze information cannot be over emphasized. A common mistake made by governments involved in regulatory reform is to reduce the ability of agencies to compile the information needed to monitor the impact of reforms (Hoekman and Messerlin, 1999). It should be noted that the absence of information in many sectors that are affected by competition may be more a consequence of old regulations (secrecy, non transparency, etc) and market closure than an intrinsic feature of the economies of developing countries, including among which Egypt. Hence, the competition authority needs some sort of statutory authority to force firms to supply necessary information.

2.5.5 Building the right support and public awareness:

The government needs to set the objectives of the law both in terms of substance and process. On substance, a system that can both regulate, and ensure effective competition is needed to allow fair and sustainable development. On process, the system should ensure interconnections between governments, markets and civil society (Lamy, 2001). Experiences of other countries have shown that the issue of public awareness is of crucial importance for the success of the law to be implemented. Without informed stakeholders, particularly the business sector and consumer organizations, the law lacks meaning.

3 Limitations of the research

As is the case with the survey type of research, individual opinions and beliefs can distort one's attempt to be objective (Mohamed, 2004)

The number of businesses erected in Egypt is counter parted by the number of organizations going out of business (because of the current dire state of the economy). This unique situation dictated an overall sampling method to be able to generalize the findings of the research. A more industry, size, or type of ownership, specific research would shed more light on the applicability and factors controlling newer management accounting techniques.

Also, the research was limited to one of the three main industrial zones in Egypt namely, Borg El Arab, Alexandria governorate. The other two main zones are: The Sixth of October, and the Tenth of Ramadan cities. These three areas are situated in the northern part of Egypt and contain the major bulk of Egypt's industrial forces. Further research is recommended to investigate the applicability of newer management accounting techniques in other areas of the country i.e. upper Egypt.

4 Further research

The institutional factors tested in this study were derived from focus groups and interviews with professionals in the greater Alexandria area. These factors should not be looked at as all-inclusive. There is a good possibility that more factors exist that were not tested or included in the scope of this research. These additional factors can be location related, industry related or capital related. For example, industries are clustered by type in the three main industrial areas. This in turn can suggest some type of bias against the industries not well (if at all) represented in the Alexandria zone. Also, capital investment

tends to intensify near greater Cairo being the capital. As this research was conducted in the Greater Alexandria area, more work is recommended to be undergone to uncover further factors (if any) and evaluate their influence on management accounting applications.

The researcher recommends if any further research is conducted, that a similar approach - focus groups, panels, questionnaire, and interviews- be administered in order to gain the advantages of multiple methods and neutralize their drawbacks.

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The questionnaire

Durham
Business School

Management Accounting Questionnaire.

By: Mohamed El Baradie

قائمة استقصاء فى المحاسبة الأدارية

الباحث: محمد البرادعى

Durham
BUSINESS SCHOOL

To whom it may concern

Mr. Mohamed El Baradie is a registered PhD student in Management Accounting at The University of Durham, England.

He will be investigating the institutional factors affecting the applicability of western management accounting concepts -namely Target Costing- in Egypt.

In order to carry out his research, he has compiled a questionnaire, and it would be greatly appreciated if you could assist by completing and returning it to him at your soonest opportunity.

Should you need any clarification, please do not hesitate to contact the researcher at 010-56 27 415, or via email at: m.o.m.el-baradie@durham.ac.uk

Thank you in advance for your cooperation.

Research supervisor

Professor Robert Dixon

University of Durham

Business School

Durham Business School, University of Durham, Mill Hill Lane, Durham City, DH1 3LB, United Kingdom
Tel: +44 (0) 191 334 5200 **Fax:** +44 (0) 191 334 5201

Dear respondent

Please allow me to start by thanking you for taking the time to complete this questionnaire.

As you must be aware, management decisions are based on many variables, and with the increasing level of competition, it is becoming a harder task for managers to take sound decisions timely.

In addition, management accounting research and innovation in the east (Japan), and the west (USA) -for example- is faster than its rival in developing countries like Egypt.

Many scholars tried to assess the transferability of management accounting methods between nations, and the factors affecting that transfer. In a trial to further their work, I will try to answer the following main question -in addition to some sub-questions as well: "What are the institutional factors that affect the applicability of modern (Eastern/Western) management accounting concepts in the current Egyptian business environment?"

Your answers will help me define the most important institutional factors that influence the applicability of modern management accounting techniques in Egypt; therefore, I would really appreciate your diligence and objectivity.

The more accurate the findings derived from this study, the better you will be able to apply these possibly beneficial management accounting concepts, and hopefully the more competitive your businesses can become.

It is needless to state that anonymity and confidentiality will be highly respected.

Thank you in advance for your time and cooperation.

Best regards

The researcher

Mohamed El Baradie

Personal data

Age:

Less than 25	25-35	36-45	46-55	56-60	Over 60

Gender:

Male	Female

Education level:

High school	Technical qualification	B.Sc. degree	Master degree	Doctorate degree	Post doctorate

Type of organization: (check all that apply)

Private	Multi-National	Previously public-owned	Corporate	Sole ownership

Position:

Lower management	Middle management	Higher management	Other (please specify)

Period with the organization:

Less than a year	1-5 years	6-10 years	11-15 years	16-20 years	Over 20 years

The organization and the environment

1- What is the industry group for the primary products for your business unit?

Transportation equipment		Machinery		Non-ferrous/metal			
Electrical/electronics		Textiles		Oil, rubber, glass			
Precision equipment		Food & catering		Pulp and paper			
Aerospace & defence		Chemicals		Furniture			
Pharmaceuticals		Steel		Other			
Wood and building material		Construction					

2 – How many competitors do you think your business unit/company has?

None	One or two	More than two but less than ten	More than ten but less than twenty	More than twenty

3 – How does your company perceive the intensity of competition?

None	Very low	Moderate	Somewhat intense	Extremely intense

4 – How predictable is the environment in which your company/business unit is positioned?

Unpredictable	Low predictability	Moderate predictability	High Predictable	Extremely predictable

5 – What is the relative importance that your business unit places on each of the following actions in meeting competitive threats?

	Extremely important	Highly important	Moderate	Low importance	Un-important
Beating competitors to the market place with new products					
Providing superior service/support to customers					
Guaranteeing speedy delivery of products					
Providing more and better features than others					
Providing more reliable, longer-lasting products					
Being cost leaders and providing the lowest priced products					

Management accounting tasks/methods/techniques

6 – What is the importance of the following factors in positioning your product in the market?

	Extremely important	**Highly important**	**Moderate**	**Low importance**	**Un-important**
Sales price					
Required profit margin					
Market share					
Volume					

7- Please state whether you agree or disagree with the following statements.

	Totally agree	**Agree**	**Neutral**	**Disagree**	**Totally disagree**
Adhering to the budget is the most important task					
Variance from budgeted figures is severely penalized					
Budgets are set by department heads after consulting their staff					
Budgets are a true representation of the forecasted status of the organization					
The budgeting technique is fairly new in our organization					
We inherited the budgeting (as a management accounting technique) from the after revolution public sector system					
Budgeting is the most suitable technique for our type of business					
Standard costing is simple and easy to apply					
Standard costing is costless					
All new graduates are familiar with standard costing and therefore need no further training					
Cost variance analysis gives us the chance to pinpoint the hot spots that need our attention					
At any point in time, we can gather cost information quickly, effortlessly, and cheaply					
Cost data bases are well maintained and available					

8 – How does your organization perceive the following tools/techniques? (Please see glossary at the end for some term definitions)

	Extremely important	**Highly important**	**Moderate**	**Low importance**	**Un-important**
Cost variance analysis					
Budget variance analysis					
Rolling forecasts					
Strategic management accounting					
Target Costing					
Total quality management systems					
Value added accounting					
Balanced scorecard					
Activity based costing/management					
Benchmarking					
Just in time					
Continuous improvement activities (Kaizen)					
Design to cost					
Design for manufacturability					
Value engineering					
Tear down analysis/reverse engineering					
Competitor cost analysis					
Cost/driver analysis tables					
Cross functional teams for problem solving					
Multi-year product and profit planning					
Quality function deployment					

9- Please rate the importance of the following management accounting tasks within the organization.

	Extremely important	**Highly important**	**Moderate**	**Low importance**	**Un-important**
Business performance evaluation					
Cost/financial control					
Planning/managing budgets					
Interpreting/presenting the management accounts					
Interpreting operational information					
Implementing business strategy					
Profit improvement					
Cost cutting					
Implementing/designing new information systems					
Capital expenditures evaluation/control					
Strategic planning/decision making					
Generation/creation of value					
Working capital and short-term finance management					
Operational planning/projects/decision making					
Productivity improvement					
Managing IT systems					

10- How important do you perceive the following items as drivers of change in management accounting

	Extremely important	**Highly important**	**Moderate**	**Low importance**	**Un-important**
Information technology					
Organizational re-structuring					
Customer-oriented initiatives					
E-Commerce/electronic business					
New accounting Software					
External reporting requirements					
Auditors' opinion					
New management styles					
Core competency goals					
Globalization					
Quality-oriented initiatives					
New management accounting techniques					
Take-over/mergers					
External consultants' advice					
Production technologies					

11- Management accountants in your organization have to reinforce the following skills to become more capable of dealing with current issues

	Extremely important	**Highly important**	**Moderate**	**Low importance**	**Un-important**
Analytical/interpretive					
IT/Systems knowledge					
Integrating financial and non-financial information					
Broad business knowledge					
Strategic thinking					
Commercial					
Team-work					
Change management					
Presentational					
Leadership					

12- Management accountants are generally regarded as

	Totally agree	**Agree**	**Neutral**	**Disagree**	**Totally disagree**
Bean counters					
Business advocates					
Business analysts					
Business partners					
Corporate police					
Financial analysts					
Scorekeepers					

13 – To what extent does the ***current organizational culture*** subscribe to the following values?

	Very high	**high**	**Medium**	**low**	**Very low**
Willingness to experiment with new ideas					
Maintaining traditional ways of things					
Doing things according to established rules					
Being a good team player					
Encouraging continuous improvement					
Selecting safe rather than risky options					
Soliciting and implementing employee suggestions					

14 – To what extent does the ***current environment surrounding*** the organization subscribe to the following values?

	Very high	**high**	**Medium**	**low**	**Very low**
Willingness to experiment with new ideas					
Maintaining traditional ways of things					
Doing things according to established rules					
Being a good team player					
Encouraging continuous improvement					
Selecting safe rather than risky options					
Soliciting and implementing employee suggestions					

15 –What is the effect of the general environment surrounding your organization on the following items (use the most important products as a benchmark)

	Very high	**High**	**Average**	**Low**	**Very low**
Competitive pressure on profit margins or funding budgets					
Rate of growth of sales of your unit in the last five years					
Market share of your business unit					
Customer loyalty					
Barriers that competitors must overcome to enter your product markets					
Rate of change of customer tastes					
Customers' ability to detect differences in product quality and functionality					
Ease with which customers can switch to other products					
Customers' ability to understand and articulate their future product requirements (features/functions)					
Number of suppliers dealt with for purchasing parts and components					
Production technology rate of change					
Reliance upon highly skilled and trained manpower for production					
We are used to the existing machinery. New machinery will only confuse workers more than increase productivity.					

16 – Please indicate the extent to which the following statements capture your business unit's relations with its major suppliers

	Totally agree	**agree**	**Neutral**	**Disagree**	**Totally disagree**
We coordinate product and process design with suppliers					
We routinely involve major suppliers in product design					
We use suppliers to make our products more customer focused					
Our major suppliers depend heavily on us for business					
We train and support our most important suppliers					
When actions of suppliers reduce our cost, we share the savings with them					

17 – Please indicate the extent to which the following statements capture your business unit's relations with other members of its value chain.

	Totally agree	**agree**	**Neutral**	**Disagree**	**Totally disagree**
The various functions in our business unit (e.g. production, engineering, marketing, finance, etc.) work together closely and effectively					
We routinely seek input from our dealers and resellers about customer requirements and product/process design					
We train and support our most important dealers/resellers.					

18 – Please indicate the extent to which the following statements capture your business unit's *relations with its customers*

	Totally agree	**agree**	**Neutral**	**Disagree**	**Totally disagree**
We seek customer input during the product design phase					
We collect data from customers about our products using formal methods (e.g. surveys, focus groups, clinics, etc.)					
We routinely analyse customer needs and make this information available widely throughout the organization					
We collect, process, and distribute customer *feedback after they have used* our products					

19 – Please indicate the extent to which you agree with the following statements (within the organization)

	Totally agree	**agree**	**Neutral**	**Disagree**	**Totally disagree**
Personal relationships prevail over professional relationships					
We can trust outsiders (suppliers, customers) with our future plans					
Change is an accepted and encouraged concept in our business environment					
The relationship between managers and subordinates goes through formal, clear, and pre-set paths					
The boss knows best					
We always look up to older personnel and follow their lead					
Change is perceived as a progressive issue, and is encouraged					

Foreign methods are better than these already applied					
Trust is the base of relationships between people					
Management always strives to make employees' work easier and more enjoyable					
The government works in an organized and professional manner					
Government planning is dependable					
Government planning and society needs go in parallel paths					
Goal setting is a corner stone in any project being professional or personal					
Department goals are well set and clear to all					
Different departments work together in harmony					
There is a general feeling among employees that their work is appreciated and valued					
When a decision is in order, the employee does his/her best to act without bothering their manager					
The environment in my business unit encourages teamwork.					
The workers' union is a major contributor to the decision making process in my business unit.					
Quality circles (look for definition in glossary) are an applied and respected factor in product development.					
Decisions in my business unit are central and non-negotiable					
The business unit manager is expected to acquire, develop, and direct resources.					
Level of education is the top deciding factor of who becomes a manager.					
Seniority is the top deciding factor of who becomes a manager.					
Age is the top deciding factor of who becomes a manager.					
Training and experience are the top deciding factors of who becomes a manager.					
Social status and level determine who takes decisions in my business unit.					
	Totally agree	**agree**	**Neutral**	**Disagree**	**Totally disagree**
Subordinates expect to be told what to do					
Subordinates are encouraged to be creative and come up with new ideas either to lower costs, or better quality					
New ideas are taken seriously					
Communicating with other personnel is preferred to be written					
Training is regarded as a waste of time, money, and effort					
The relationship between managers and subordinates goes through formal, clear, and pre-set paths					
We always look up to older personnel and follow their lead					
Change is perceived as a progressive issue, and is encouraged					

It is always safe to follow what everybody else is doing					
If religion and work assignments interfere, the assignment prevails					
The transportation infrastructure is dependable					
Data about the market can easily be acquired					
Data about the market is dependable					
Data about the market is highly dependent on informal means (i.e.: roomers)					
Rules are made to be broken					
If the rule is not flexible, we tend to find alternate ways to get things done					
Formal networks prevail over informal ones					
If a new system is introduced, management consults/trains employees before full application					
Authority is equal to responsibility					
Imported methods are not always suitable for our environment					

20 – To what extent do you price your most important products based on the following methods?

	Extensively	**Generally**	**Moderately**	**Somewhat**	**Not used**
Estimated cost plus a profit margin					
To meet competitor's price					
To beat competitor's price					
What the market will bear					
Market price that will give us our target market share					
Adjust last year's price for inflation					
Other (please describe):	.....				
	.....				
	.....				
	.....				

21 – Are you currently using Target Costing (TC) at your business unit?

(In answering this question, please consider the following definition of Target Costing)

"The Target costing process is a system of profit planning and cost management that has the following key features. It is price led costing in which market prices determine allowable costs. Cost reduction is guided by a systematic analysis of features and functions most important to customers. Cost management takes place mostly at the product design stage. Cross-functional teams that include both internal and external value chain members carry out the process. Target Costing initiates cost management at the earliest stages of product development and applies it throughout the product life cycle"

I am not sure	
We never seriously considered implementing TC	
We considered/attempted TC, but did not implement	
We considered TC, but have not made a decision	
We attempted TC but abandoned it	
We are planning to implement TC in the future	
We recently adopted TC, but have not fully implemented it	
Target Costing is well established in our business unit	
We use TC or many of its methods under a different name Which is: "....."	

22 – If you have not adopted TC, to what extent did the following factors influence your decision not to implement TC? If you have adopted TC, to what extent are the following factors considered barriers to improving TC at your business unit?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lack of familiarity with Target Costing					
Perception that TC is a passing fad					
Faced with more pressing business problems					
Did not get top management sponsorship/support					
TC is not relevant for our kind of business					
We have a good understanding of our costs					
Cross-functional cooperation is difficult to get					
People unwilling to change					
Did not get any results or benefits from its use					
Lack of education/training about TC					
No reason to change our pricing methods					
Missing targets is viewed negatively					
We lack systematic methods for incorporating customer input					
The accounting/information system does not support TC					
No rewards for achieving targets					
Other initiatives are more important					
Do not have resources to implement					
Other (please describe):					

Glossary.

Total Quality Management (TQM)
An approach that focuses all organizational resources on achieving quality throughout the value chain. Emphasis is on quality from the customers' point of view. Cost should be reduced as product failures and follow-on customer service requirements are reduced.

Benchmarking
The process of investigating and identifying "best practices" and using them as a standard to improve one's own processes and activities.

Continuous improvement program
A program to continuously and incrementally improve yields, eliminate waste, reduce response time, simplify design of both products and processes, and improve quality on a continuous incremental basis.

Design to cost (DTC)
A method to ensure that product designs meet a stated cost objective. Cost is addressed on a continuing basis as part of product or process design. The technique embodies early establishment of realistic but difficult cost objectives, goals, and thresholds and then manages the design until it converges on these objectives.

Design for manufacture and assembly (DFMA)
A simultaneous engineering process that optimizes the relationship between materials, manufacturing technology, assembly process, functionality, and economics. It seeks to ease manufacture and assembly of parts or eliminate parts.

Value engineering
A systematic method of evaluating the functions of a product to determine whether they can be provided at a lower cost without sacrificing the features, performance, reliability, usability, and recyclability of the product. Generally used at the design stage of a product to improve customer value and reduce costs before production has begun.

Activity based costing (ABC)
A method of costing in which activities are the primary cost objects. ABC measure cost and performance of activities and assigns the costs of those activities to other cost objects, such as products or customers, based on their use of the activities.

Activity Based Management (ABM)
The use of activity cost data to manage activities. The purpose of ABM is to analyse whether activities are of (add) value to customers, and how they can be performed to maximize customer value.

Cost tables
Databases of detailed cost information based on various manufacturing variables. Cost tables represent an easily accessible source of information about the effect on product costs of using different productive resources, manufacturing methods, functions, product designs, and materials.

Quality Function deployment (QDF)
A structures matrix approach to documenting and understanding customer requirements and translating them into technical design characteristics for each stage of product development and production

Quality Circles
Groups of workers that gather informally to discuss quality issues (i.e. problems, suggested improvements)

The Interview guide

Theme 1: <u>General Data</u>

- What is your management level in the organization?
- How long have you been with the organization? (in years)
- What qualifications do you have? (educational and/or professional)
- What is the legal type of your organization?
- What business is your organization in?

Theme 2: <u>Applied Methods</u>

- How many "updated" cost/management accounting methods have you applied in the last five years? What were they?
- If you applied a new method (s), how did you know about it/them?
- How long did it take for the new method(s) to get accepted / established in your organization?
- How did you go about applying the new method(s)? Did you follow any steps or system to apply?
- How successful do you rate the application of the new method(s) on a scale of 1-5?
- How easy was it/would it be to change/improve the management/cost accounting techniques within the organization?
- What types of obstacles/resistance should management expect to face when undertaking the task of MA techniques improvement?
- Is there a clear plan for improvement in the organization?
- How far further in time do you plan your production (and subsequently plan costs?)
- {After introducing the concept of Target Costing} Do you apply it in any way?
- If not, how successful/beneficial would the application of such technique be?

Theme 3: <u>Institutions & internal synergy</u>

- The organization has a comprehensive and transparent data base/newsletter that guides and informs employees of initiatives and future plans of the organization.
- It is always the manager's responsibility to suggest improvements (methods, techniques, material ...Etc...)
- The department of Research & development is one of the biggest and respected departments in our organization.
- Suggestions for improvement are valued, commended, evaluated, applied, and rewarded.
- Collaboration between personnel/departments helps improve the working environment within the organization

- Times are tight. Spending should be at its lowest even on R&D.
- Little effort has to be exerted to have a new technique accepted and applied.
- Resistance to change or innovation is at its minimum in our organization.
- Employees' opinions are always solicited before, during, and after the introduction of a new technique (especially management accounting techniques)
- The Cost/Management Accounting department is well respected within our organization.
- Do you have a product design department
- If not, who designs your products? How?
- How are the communication channels between the major departments in your organization?
- How formal/informal are these communication channels?
- Do you have an intranet?
- If you are a multinational organization, how are instructions, rules, bylaws communicated between your organization's parts/branches?

Theme 4: Competition

- How do you see the trend of competition in your line of business? (i.e. number of competitors)
- How easy is it for a new producer/rival to get in the market?
- Is there free competition in your line of business/production facility area?
- What are the costs (known /hidden) associated with establishing new ventures in your field of business?

Theme 5: The surrounding environment & the market

- How important is it in your organization to gather market data (very, moderate, low)?
- How available/dependable are the results of market research studies in relation to your business?
- Do you gather market data regularly?
- Do you gather market data formally?
- How is this data processed? By whom?
- Which department demands market data in the organization?
- How would you describe customers in Egypt now? (Smarter, easily influenced...etc...)
- If asked, what reservations/doubts would you have about the environment (business/social) and its influence on your organization's performance?
- Government regulations are clear and help stabilize your business

Theme 6: <u>The value chain</u>

- Do you discuss your production plans with your suppliers?
- Do you discuss your production plans with your agents/distributors?
- Please rate the degree of trust (out of 10 for example) that you have in the members of your value chain. In other words, how reliable/trustworthy are the organization's external links in the value chain? (Suppliers, agents, customers)?