

THE INTEGRATION OF COST MANAGEMENT TECHNIQUES AND THEIR IMPACT IN THE SERVICE OF BUSINESS ORGANIZATIONS

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ABSTRACT

Technological development and modern manufacturing environment have had a clear impact on the development of cost accounting, which has resulted in modern cost accounting techniques in response to these developments, especially with regard to cost management techniques (such as just-in-time production system, flashback system, total quality management, cost-based management and budgeting, continuous improvement, target cost, value engineering, benchmarking, constraint theory and balanced scorecard) this study is seeking to demonstrate the impact of integration between these technologies and their interdependence, in the service of business organizations, in controlling and then reducing the costs as well as stating the sequential role of each technique in harmony with other techniques, through a theoretical and analytical study conducted by researchers after reviewing the previous studies and having reached a set of conclusions and recommendations.

Keywords: *Cost Management Techniques, Business Organizations*

1 .Introduction

Technological development has had obvious effects on aspects of life in general and production activities in particular. Thus, production activities have been affected by technological development, which has impacted on cost accounting, this being the response to many practices or techniques represented by cost management techniques that have accompanied the changes in the current business environment, represented by the explosive growth in communications and the information revolution, the deregulation of global markets and the free movement of funds. Moreover,

developments in the tastes of customers, among other factors, have intensified the global competition among business organizations, which led to the need for these organizations to search for methods and techniques in order to help them survive and continue their activity in the business environment through the effective and efficient application of specific techniques, so as to manage the cost of strengthening the capacity of the organization to provide products at acceptable costs, as well as strengthening the capacity of the organizations to face competitors' prices, and the impact of all these factors on the development of critical success factors of cost, quality, customer satisfaction, and creativity.

The research problem lies in the inability of organizations to control markets and pricing decisions and thus the inability to control costs and the dependence of organizations on traditional methods to reduce costs, although the modern industrial environment has produced many productive methods with great technical advances and high automation that returned the impact on accounting, especially cost accounting and the emergence of new developments to manage costs, this being called *cost management techniques*, which can manage costs and reduce them and achieve customer satisfaction and growth and continuity in the market.

Literature Review

Before recognizing cost management techniques, it is necessary to recognize the concept of cost management, as it is defined as the performance and effort exerted by executives and others in the field of introducing, including and logically linking costs to the planning and control functions in the short and long term (Bakri and Naeem, 2011:216).

(Basile ,2013:316) considers cost management to be the set of actions taken by managers in order to achieve customer satisfaction along with cost reduction and continuous monitoring. Cost management helps to accurately reflect the cost of products, control and measure performance by tracking costs through the use of causal relationships between costs and activities, thus leading to a better understanding of activities in order to help continue organizational strategies.

After learning about the concept of cost management, we can identify the techniques of cost management, which have been divided into four groups, each group including three techniques as follows:

1.The first group:

This group included three techniques as follows:

1.1 .JUST IN TIME (JIT)

JIT is a revolution in inventory and cost management through its philosophy of getting raw materials on time from suppliers, in accordance with production schedules. This technique offers a range of benefits including reduction or cancellation of funds frozen in stock, reduction of damage and consequently reduction of damage costs, enhanced product quality (through TQM), reduction or elimination of recycling costs, savings in production costs through developing the flow of goods during operations (Weygandt et. al, 2012:159).

1.2 .The technique of back flash costing

One of the results of the application of JIT technology is the simplification of the system of accounting for the cost of the product, where it can be an alternative to the method of synchronous or sequential tracking using the reverse cost flow method or the so-called back flash costing. (Horngren et. Al., 2003) This technique is known as “a cost measurement system in which the recording of a product's situation is delayed until it becomes a complete product or until the products are sold, *i.e.*, the non-recording of the change of raw materials into production under operation” (Al-Jamal, 2010:70).

1.3. The technique of total quality management :

The TQM technique is defined as an intellectual and cultural entrance to ensuring the quality of the company in all stages, from the specifications that address the requirements of the customer through the design and production processes and subsequent stages, and depends on the integration of all activities, involving all employees in its exercise, especially senior management leading to continuous improvement of products). (Dabbagh, 2002:4).

2.The second group:

This group includes three techniques as follows:

2.1 .Activity-based costing (ABC)

From Horngren's perspective, he defines it as “a system that first collects indirect costs for each unit activity and then allocates activity costs to products, services, or other objectives that cause activities” (Horngren et. Al., 2008:140).

Thus, ABC technology is based on the focus of activities as an activity or task with a specific purpose, where the costs of activities are grouped in the form of complexes called cost pools (Cost Pools) by means of cost guides to be directed cost for each activity and then allocate assigned activities to products or services according to cost causes based on the cause / effect criterion, which aims to achieve maximum equity in

cost allocation and maximum accuracy in allocation. Here it is necessary to identify the concept of activities that add value and activities that do not add value .(Basiley, 2011:60) :

2.2 .Activity-based management (ABM)

As a result of the emergence of ABC technology, which was based on the study and analysis of activities, there was a great orientation and interest in the adaptation of ABC information about activities in the service of management and cost management (Al-Jamal and Noor, 2005). ABM technology has emerged as a technique based on assisting management in making decisions. This is done by using cost-based activity information to satisfy customers, fulfill their needs and improve profits (Basiley, 2013:313).

Thus, we can say that ABM seeks to manage the activities and manage the costs of those activities by dealing with information on financial and non-financial activities.

2.3 .Activity-based budgeting (ABB)

This technique can be implemented when the unit applies ABC technology using ABC information, where ABB is described as a 'budgeting method' that uses the activity cost pyramid to establish the budget of physical inputs and costs as a function of planned activity and is similar to the method (outputs / inputs) of budgeting, where physical inputs and costs are placed in the budget as a function of planned activity (Agha, 2006:24).

Activity-based budgeting makes managers view fixed costs as a variable in the medium to long term, where the term "committed cost" is used because managers have committed to pre-position resources and will not change their processing in the short term due to short-term fluctuations (Yair & Balachandran, 2016).

3.The third group:

This group also includes three techniques as follows :

3.1. The target cost technique

One of the most important costs management techniques has been defined as “one of the market-oriented cost management techniques used at the beginning of the product life - the early stage of the product life cycle - to enhance profitability and productivity in general” (Al-Dhahabi & Al-Ghaban, 2007:236). It is one of the tools of cost management in a competitive environment because it targets three main competitive elements: price, quality, and cost, besides creativity (Al-Saboua, 2000:44)

3.2. The value engineering technique

Value engineering technology can be said to be a response to the target cost technique. The value engineering technique (defined as product design activity from different angles at the lowest possible cost through a reconsideration of functions or benefits needed by the customer) (Basili, 2001:105).

Value engineering relies on functional analysis to determine the main functions and preferred characteristics of the product, study its components and parts, and then evaluate alternatives, including product modification or the development of alternative products, as the costs of these alternatives are compared with what the consumer is willing to pay for these products (Khader, 2005:25).

3.3. The continuous improvement technique

In Japan, continuous improvement is called Kaizen, a modern and important technology-based on gradual and successive improvements in production. These improvements are reflected in lower costs and improved product quality.

Continuous improvement can thus be defined as “incremental improvement through small improvement activities rather than large ones, where those improvements are achieved through innovation or significant investment in technologies, and improvement is a goal for which senior management, executive management, and all activities are responsible for its implementation” (Hiiton, 2004:220).

4.The fourth group:

It comprises three techniques, as follows :

4.1.The benchmarking technique

we find that benchmarking is based on finding better levels of performance within the economic unit, for internal comparison, or levels of external comparison with competing organizations or operating within the same sector, through which openness to the experiences and successes of others is achieved (Al-Jamal , 2010).

4.2. The theory of constraints technique

In light of the increasing demand for high-quality products along with increasing competition, industrial units began to study and show interest in the production capacity and how to use some of the scarce resources as determinants of those units, because of which organizations were unable to meet all the demand for their products on the market.(Garrison& Noreen, 2006), To use methods that determine how to optimize the use of these resources, the system of planning needs of resources as well as the technique of production on time, and then developed a new system combining the

advantages of the previous two systems or techniques known as the optimal production technique that achieved a great success and then was developed into the so-called simultaneous production leading to the theory of constraints (Hilton, 1999:224), which was defined as “an ongoing process to identify and remove system constraints in order to ensure the optimal utilization of resources and increase the output of finished products as large as possible, to ensure increased profitability of the economic unit” (Al-Tariyyah, 2006:12).

4.3. The balanced scorecard technique

Under the traditional concept of accounting measurement, organizations were focusing on financial results, but the strategic vision added a new dimension in the measurement of performance which was represented by the use of non-financial measures in addition to financial measures, especially after the shift of attention of organizations towards the needs of customers in terms of cost and quality. That vision introduced a new performance measurement technology called Balanced Scorecard (BSC).(Barzanji, 2008:41) The research is based on several hypotheses:

H1: Cost management techniques are the result of the impact of cost accounting on the modern industrial environment and its interaction.

H2 : The use of a set of cost management techniques together have more of a positive impact on the organization than the use of a particular technology alone.

H3 : The objectives of cost management techniques are consistent with the objectives of the organization.

Research Methods

The purpose of this paper is to demonstrate the effect of the integration of managerial sensitivity techniques in the service of business organizations. The researchers relied on previous studies that examined this topic. An analytical approach was used to demonstrate the hypotheses of this study, as these techniques were classified into four groups and then finding the relationship between The techniques in these groups, and then find the complementary relationship and interconnection between these technologies in order to demonstrate their impact on the service of business organizations

Results and Discussions

Since JIT technology is a comprehensive storage management philosophy or is considered to be a system that reduces production costs by eliminating as much as

possible production delays and inventory costs, it has been met in response to cost accounting by a new cost recording and tracking technique: flashback or so-called reverse recording. JIT and BFC are integrated to achieve the goals that JIT seeks to achieve through their common working mechanism. In the light of modern manufacturing, efficient management has become one of the main elements for planning the inventory as it seeks to reach the lowest level of the inventory and then reach zero inventory by relying on the arrival of materials only when needed, and this is reflected in lower costs(Al-Kasab, 2004).

TQM integrates with JIT technology and TQM is an essential matter to JIT. When a worker in a manufacturing cell detects a defect, This method leads to the production of a defect-free model, called the Zero Defect Model, which is shared by JIT, B.F.C, JIT and TQM techniques. Thus, JIT, B.F.C and TQM techniques are integrated in terms of implementation mechanism as JIT is a modern technique, B.F.C has a cost accounting response and TQM is a component of JIT. The three techniques are interrelated in achieving the objectives, such as the goal of reducing costs by eliminating inventory and reducing its costs which are at the same time the most important objectives that business organizations seek to achieve.

By identifying and categorizing the main activities involved in the manufacturing of products, ABC technique is based on the fact that activities consume resources and then products consume those activities. Thus, the costs of activities are collected in complexes in preparation for allocation to cost targets, products or services.

The output of ABC technique is an important source of information for the launch of ABM and ABB techniques where ABM and ABB techniques cannot be applied in isolation or without the application of ABC technique because the latter is their primary source of information.(Al-Bakri and Naeem, 2009),

As for the interrelationship between the three techniques, their applications reduce production costs by relying on costly work to analyze activities and work to exclude activities that do not add value through ABC and inefficient activities through ABM, while maintaining efficient and value-added activities. This has a significant impact on the economic unit and its performance. . (Drury, 2005),

It is clear from the above that to achieve the T.C technique, relying on the value engineering technique V.E in order to reduce the cost during the planning and design phase, while maintaining the quality of the product to ensure fulfilling of the needs of customers and their satisfaction.

Continuous improvement, Kaizen, is essential under the strategic vision of cost planning and control in order to reduce costs for new or existing products.

Kaizen technique is complementary to T.C and the integration between them is clear especially since the goal of each one is to reduce the total cost of the product despite the different areas of the reduction procedure, Kaizen focuses on the stages of design, production, marketing and customer service from the product life cycle.

Combining these complementary and interrelated relationships between T.C, V.E, and Kaizen techniques has an impact on the economic unit and its objectives because the objectives of these techniques and the impact of their interdependence are consistent and have a positive impact on economic unit, as the impact of these techniques on the economic unity is reflected in the value possessed by its products or services provided. (Wayne & James 2003),

A balanced scorecard contributes to providing non-financial information to the management of the economic unit, which helps in measuring the performance.

The ABC technique is related to the T.C technique

The ABC application provides the economic unit management with the necessary information to understand the structure of the cost of its products or services, and therefore the administration can make pricing decisions. ABC also provides accurate cost information as this information helps the economic unit management to determine the competitive price and maintain a reasonable profit. It provides a clear view of the cost of products or services to support decisions in determining the optimal mix of products.

ABC also has a relationship with TQM, because ABC contributes to continuous improvement and consumer focus.

V.E's relationship with TQM is evidenced by V.E's reliance on quality to choose between the alternatives offered for product parts. Quality is part of the value because V.E maintains product quality from design to quality engineering.

Also, the division of the economic unit into a group of activities, whether administrative or cost, through the adoption of ABC and ABM techniques, provides information about the activities is a feed for the technique of VE, which is involved in the evaluation of alternatives offered to redesign the product. This shows the complementary relationship between ABC, ABM and V.E techniques. (Al-Tikriti, 2001),

V.E integrates with the benchmarking of their participation in order to continuously improve non-accelerated progression, so as to improve productivity, quality, reduce

costs and meet the needs and desires of customers to obtain a product of value above the price they wish the customer to pay, as well as the possibility of using V.E benchmarking technique in the product design and development phase.

As for the relation of TOC theory with some other techniques, TOC is seen as a continuous improvement process that does not end at a certain stage. Especially in the operational phase, both of which are mostly focused on the process causing the constraint, Kaizen is progressive and TOC has small steps that do not exceed the area where the constraint occurs.

In addition, Kaizen aims to continuously improve along the value chain to reduce costs and eliminate activities that do not add value. TOC aims to maintain, optimize and optimize the efficiency of enrollment resources, in order to exploit the potential of constraint resources and maximize profitability, as well as the goal of reducing costs resulting from the misuse of enrollment resources, in order to ensure customer service.

The relationship of TOC with TQM

The quality of the impact on the occurrence of constraints and suffocations that occur in the production process is due to poor products resulting from the use of non-conforming materials, so the attention to the quality of the product will lead to overcoming many of the constraints, not only the constraints arising from them, but the costs that tend to rise in the event of these cases.

TOC's relationship with V.E is evidenced through the goal, as they both aim to improve the product while maintaining quality by simplifying parts of the product, so that they can complement each other in the application, *i.e.* V.E can be used to address the constraints that appear in any organization, depending on its location and degree of impact.

TOC's relationship with JIT is based on the concept of withdrawing production rather than payment as it is in traditional production systems, and the application of JIT technique has a major impact in directing management attention to the efficient flow of the product in the production process and identifying areas that impede the process and finding appropriate ways to address them, as well as JIT aims to eliminate all unnecessary activities that may cause delayed delivery to the customer, and also reduces the manufacturing cycle time by reducing waiting time, preparation, configuration, elimination of loss and elimination of damage. These are all objectives that TOC and JIT seek to achieve, along with the concern to delete stock or reduce it to its lowest level.

As for the TOC and ABC relationship, the integration of the two techniques yields significant benefits. In addition to describing TOC as a basis for continuous improvement, they can be managed and evaluated using ABC, through the ability of ABC to help detect areas of constraint from using ABC information. (Yair & Balachandran, 2016)

Conclusions

Cost management provides the information needed by the management of the economic unit, whether it is financial or non-financial information through the developments of cost accounting and represented by cost management technique, through the new techniques used in cost accounting, helps to show the cost of products accurately as well as control and measure performance by monitoring costs by use of causal relationships between costs and activities, to help continue organizational strategies, this mean the cost management techniques are the result of the impact of cost accounting on the modern industrial environment and its interaction And what proves the hypothesis H1 .It is clear from the analysis of the study that there is an integral relationship and correlation between management accounting techniques and the use of a set of cost management techniques together have more of a positive impact on the organization than the use of a particular technology alone, because of the relationship of integration and interdependence between those techniques H2, and the objectives of cost management techniques are consistent with the objectives of the organization, which seeks to reduce costs and improve quality and achieve customer satisfaction and growth and continuity in the market H3.

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