

TARGET COSTING (TC) SYSTEM AND ITS UNCONTROLLABLE FACTORS: A CASE STUDY FROM EGYPT

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Abstract : The present investigation aims to state uncontrollable factors which affect applying Target Costing (TC) system in Egyptian case. The study used the quantitative method to describe and analyze the data and results of applying this system in a company for industrializing the vehicles (Shahin 1400CC) at Cairo. The study illustrated that the greatest part of cost Shahin 1400CC is the value of the imported components as it is controlled by the state that has the license (i.e. the parent company) . As well as the changes in the exchange rate (American dollar vs. Egyptian pound). The cost value of uncontrollable factors(4 factors) represent more than 60% of total cost of all factors (15 factors).The uncontrollable factors were foreign exchange rate, general and administrative costs, taxes and commission which represent (4/15) 26.67% of total factors (Controllable and uncontrollable factors).

JEL classification: M41, M42

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1. INTRODUCTION

The recent and rapid changes in business environment led to the emergence of new systems of cost, and the increasing global competition to maximize the role of cost management. The precise knowledge of the product cost and its pricing as well as proper planning concepts became more important than they were in the past. Each establishment is seeking for gaining a competitive advantage to enable them to survive and continue in the global market competitiveness.

To achieve a competitive advantage a plan needed to apply the concepts developed for the management of the total cost, and strategic cost management and requirements of the different tools and the management of the target cost, and value engineering, cost management systems to participate, accounting for the cost of the product, and control operations and the improvement and continued development of cost accounting and cost activity, and determine the cost of the product life cycle, and strategic analysis of the cost .

Modern industry's environment has developed in today's world to become competitive in the global markets. Operating systems and traditional management

philosophies are not possible at all, and it was realized that the giant industrial establishments are headed towards the use of a number of techniques that would bring about changes and dramatic developments in the management of these establishments.

Prompted the current competitive environment of the markets a lot of establishments around the adoption of a new strategy for the competition by both the price and quality, and is required to achieve these strategic design of an integrated system of the Target Cost (TC) and is based on three essential pillars: the Target Cost (TC) and improvement and the continued development of Target Cost (TC) system, and the method of preservation on the cost .

It became necessary at the present time to use new methods of industrial establishments in the systems of accounting and administrative costs so that they could produce new products that meet the requirements and desires of the final consumer, is also working to reduce the cost of products by eliminating waste in all its forms, in order to achieve this requires such facilities to the Target Costing (TC) system, which is considered newly input to the cost management.

So, firms must be make a classifications for factors cost into two groups (controllable factors and uncontrollable factors) to determine reliability the system's Target Costing (TC) in this firm.

2. RESERACH OBJECTIVES

The main objectives of the research are to applying the system of the Target Costing (TC) on one of Egyptian manufacturing firms and to determine its uncontrollable factors.

3. RESEARCH METHODOLOGY

The author used the quantitative method to describe and analyze the applying Target Costing (TC) system in an Egyptian firm (Al Nasr Company).

Al Nasr Company for vehicles at Cairo is a pioneer company in the domain of industrializing the vehicles, heavy vehicles and buses. Recently, the activity of producing and assembling the vehicles that are represented in Al Nasr Company for industrializing the vehicles and the activity of producing and assembling buses and heavy cars (tractors) that are represented in the engineering Company for industrializing vehicles are separated .

The researcher has focused on the activity of producing and assembling the vehicles, consequently focusing upon Al Nasr Company for industrializing vehicles as the company produces Florida Cars with or without all the luxuries. As well as it produces Shahin Cars with its various models whether 1400CC with luxuries or without luxuries (i.e. with carburetor).

Consequently, the researcher has applied the system of the Target Costing (TC) on the company by focusing on the product of the company (Shahin Car 1400CC) and noting the consequences that are resulted on the financial; lists and the profits of the company.

4. REVIEW OF LITERATURE

A review of the Target Costing (TC) system literature reveals that Target Costing (TC) system is often associated with Japanese firms and empirical research has mainly been performed by Japanese researchers for the Japanese context (e.g., Kato, 1993; Cooper and Yoshikawa, 1994 and Tani et al., 1994). That most western-based research has concerned the rate of mapping usage from Target Costing (TC) system in different countries (Ax et al., 2008). Surveys on the adoption of Target Costing (TC) system in Japan report a much higher rate of adoption than by Western firms. For example; Lorino (1995) stated that over 80% of large companies in the assembly industries had already applied Target Costing (TC) system in Japan.

But, in the US, Ernst , Young and IMA Survey (2003) stated that 26% of IMA member firms had adopted Target Costing (TC) system. Likewise, Chenhall and Langfield-Smith (1998) reported that of 78 large Australian manufacturing firms, 38% had employed Target Costing (TC) system. Israelsen et al. (1996) found that 50% of Danish firms had adopted Target Costing (TC) system. In another study, Dekker and Smidt (2003) reported an even higher adoption rate from a study of Dutch firms listed on the Amsterdam Stock Exchange, with 59.4% of firms using Target costing (TC) system.

In the light of the evolution of the contemporary environment for the industry as a result of the search each business establishment to achieve competitive advantage, not only at the local level but also at the global level, which is also one of the most important manifestations of each plan's establishment to reduce the cost of competitive products in the fastest similar establishment, which provide the same product to ensure its survival in the competitive market system for accurate determination of cost management.

The traditional methods that can not be used in the establishment under conditions of fierce competition that prevails in the market, and has become a business that is willing to stay to determine the quality of consumers wishing to do business with them, and then identify appropriate rate of the product, and that method, called the price method is derived from the market.

The presence of the open environment, and ease of communication between competitors to increase competition among enterprises and each other, which led to increased reliance on cost management to achieve competitive advantage, and the best proof of that, an entrance to some facilities accounting for the cost of the Activity Based Costing (ABC).

The massive and sustained development in the use of means and methods of modern technology in the industry to a permanent change in the models presented in the commodity markets in terms of quality, design and services used, and therefore become imperative for establishments to gain competitive advantage through the achievement of continuous improvement and development in the specifications of the product, and methods manufacturing and design to meet the wishes of consumers.

Cost data has become one of the most important pillars on which it depends establishments in the decision-making - and that under the current conditions of

competition - and no doubt, that the accuracy of cost data are determined by the degree of benefit or the benefit of non-data contained in the reports of the cost of the product.

The concept of integration is applied across all functions of the business, as well as across organizational boundaries to include suppliers and consumers, and achieve quality and excellence in manufacturing to gain advantage competitive in global markets is through the management of the Value Chain, which is the follow up and integration of activities that add value to the product.

The aim of some establishments to increase the chance of competitive edge and increase profitability of their products is responsible for the reduction of production costs, without interest and the quality of the performance of the product to become unwanted product from the viewpoint of the consumer.

There are still numerous industrial establishments - especially working in the Egyptian market - Applying the system of cost plus profit margin, Cost Plus, as a result of directors of awareness lack these establishments in the methods of modern cost management (Abbas,2009).

Drury and El-Shishini(2004) distinguished between controllable and uncontrollable costs.

They showed that applying the controllability principle is not an easy task because control typically lies along a continuum with two extremes: full control and no control; and in between there are different degrees of control. Conventional wisdom provides the following guidance for distinguishing between controllable and uncontrollable items:

- A. If a manager can control the quantity and price paid for a service then the manager is responsible for all the expenditure incurred for the services and the expenditure is fully controllable.
- B. If the manager can control the quantity of the service but not the price paid for the service then the costs are partially controllable and only that amount of difference between actual and budgeted expenditure that is due to usage should be identified with the manager.
- C. If the manager cannot control either the quantity or the price paid for the services then the expenditure is uncontrollable and should not be identified with the manager.

Merchant (1989) and Drury and El-Shishini (2005) classified the sources of uncontrollable factors into the following groups:

- Economic and competitive factors; (business cycles; competitor's actions; changes in customer's tastes; changes in law and regulations; and foreign exchange rates),
- Acts of nature; (earthquakes, floods, riots and strikes),
- Uncontrollable costs (research and development, group head office, general and administrative costs, taxes, interest and most corporate or common costs allocated to divisions) and

- interdependencies (Interdependence is where a responsibility center is not completely self-contained, so that other centers within the organization affect the outcomes of a division).

5. RESULTS AND DISCUSSION

The researcher has noticed that in the last period and as a trial to face the competition in vehicles market, and as a trial from the company to cope with the technological development in vehicles market, the company has developed and updated a modern product that is Shahin 1400CC by injection. Therefore, the company has evaluated the proposed costs of this model, the list of the evaluative costs are shown in Table no.1.

Table no.1: The list of the evaluative costs of Shahin Car Model: 1400CC, SL, Injection.

The models statement	The value
The main price (The imported components)	3550\$
X The price of American dollar *	5.65 LE**
= The value (Foop)	20057 LE
+ Bank commission	1050 LE
= The total of the value (Foop)	21107 LE
+ Insurance and naval charge	1150 LE
= Safe value	22257 LE
+ Custom fees	2003 LE
+ Uploading and internal transformation	250 LE
= The total of the imported components	24510 LE
=Local requirements	16200 LE
= The total of the requirements	40710 LE
+ Collection expenses	4697 LE
+ Alpo expenses	650 LE
+ Insurance cost	750 LE
+ Deteriorating injection investments	750 LE
+ Maintenance coupon	112 LE
+ Propaganda and advertisement	250 LE
= The total of the cost	47919 LE
+ The distributor commission	1300 LE
= The total	49219 LE
+ Profits margin (nearly 10%)	4921 LE
= The total without taxes	54140 LE
+ Sales tax (15%)	8121 LE
= The total including the taxes	62261 LE
+ Development fees	1867 LE
= Sale price	64128 LE

*Prices of 2011.

**Egyptian pound (LE).

Through studying the list of the previous evaluative costs, The Company has followed Cost-Plus System within the price of selling the unit, this means that it evaluates the costs then adds the profit to it as well as the taxes upon the sales and development fees to obtain the price of selling cars that reaches 64128 LE for each unit.

The researcher has concluded the following points:

1. The sale price that is appropriate for the consumers comparing to the prices of the typical cars that is considered the target sale price for the company is nearly 60.000 LE.
2. The rate of the profit as it was mentioned before has been evaluated by the company by 10% of the total of the pre-taxing costs and the fees of development.
3. Concerning the Target Costing (TC) system and its estimation, it may be taken into consideration that the company has estimated 10% of the profit from the total costs as a profit margin (The Target Costing (TC) system for the research), then adding 15% of the total cost as sales tax, then adding the development fees that reaches 3% of the total cost.

Consequently, the Target Costing (TC) system can be evaluated as follows:

- a. Evaluating the total costs before adding the fees of development (3%):

Total cost before adding development fees	+	Development fees	=	Target Costing (for company).....1
X	+	0.03 X	=	60.000
		1.03 X	=	60.000
∴		X	=	58252.4

- b. Evaluating the total costs before adding sales tax (15%):

Total cost adding before taxes	+	Sales Tax	=	Total cost before adding development fees.....2
Y	+	0.15Y	=	58252.4
		1.15Y	=	58252.4
∴		Y	=	50654.2

c. Evaluating the Target Costing (TC) before adding the profit of 10% .

Evaluative Target Costing + Profit = Total cost before adding taxes.....3

$$\begin{array}{rclcl} Z & + & 0.10Z & = & 50654.2 \\ & & 1.10Z & = & 50654.2 \\ \therefore & & Z & = & 46049 \end{array}$$

Comparing to evaluative Target Costing (TC) system that is estimated by 46049 LE of the total costs before adding the profit and the sales tax and the previous development fees that is estimated by 50243 LE, it may be concluded that:

The objective of declining the cost (The part that shall be reduced) =

$$50243 - 46049 = 4194 \text{ LE}.....4$$

Therefore, the question that is posed is:

In which element of costing elements, the cost shall be reduced? In order to answer this question, an analysis of the costing elements that consists of the total cost of Shahin Car 1400CC (Injection) shall be performed.

It is noted that through the analysis, the cost of the car depends on four main elements that is:

- The cost of the imported components that is represented in the price of requirements purchase and the commission of bank, insurance, naval charge and custom fees and discharging with the total of the cost that reaches 24807 L.E.
- The cost of the local requirement with the total cost that reaches 16200 L.E.
- Other expenses that is represented in the collection outgoing, Alpo expense, guarantees cost, deteriorating the investments of injection and publishing, maintenance, propaganda, interest and the commission of the distributor with the total cost that reaches 8212 L.E.
- The margin of the profit, sales tax and development fees that is evaluated by 14909 L.E.

After the analysis and after identifying the target sale price and the Target Costing (TC) system, a list of the costs can be prepared (Totally) according to the system of the Target Costing (Table no.2).

Table no.2: List of the costs according to the system of Target Costing (TC).

The value, LE		The element
Total	Partial	
60000		The price of target sale: Discarding the margin of the profit, the sales tax and development fees.
(13951)		

46049		= The target costing
		(-)The evaluative costs (according to the company estimation)
	24807	a-Imported components
	16200	b-Local requirements
	8212	c- Other expenses
49219		The total of the evaluative costs
(3170)		= Aiming at reducing the cost (The part that shall be reduced)

Finally , in this case , the uncontrollable factors are 4 factors (foreign exchange rate, general and administrative costs, taxes and commission) and the total factors (uncontrollable and controllable factors) are 15 factors. The percentage of uncontrollable factors is 26.67% of the total factors. The cost of uncontrollable factors represent more than 60% of total cost of all factors. (for more see: Merchant,1989).

6. CONCLUSION

The results of the study showed that the greatest part of the cost is the value of the imported components, as it is controlled by the state that has the license (i.e. the parent company), as well as the changes in the exchange rate (The value of American dollar comparing to Egyptian pound). Therefore, it was difficult to reduce the cost as it depends upon many uncontrollable factors.

So any carmaker, particularly in developing countries such as Egypt, who depends in the manufacture of cars on the import of a large part of the manufacturing components, he will encounter the problem of inefficient use of cost system , Finally, in this case , the percentage of uncontrollable factors is 26.67% of the total factors (uncontrollable and controllable factors). The cost of uncontrollable factors represent more than 60% of total cost of all factors.

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