TARGET COSTING – THE RESPONSE OF THE MANAGERIAL ACCOUNTING TO CHANGES IN THE ENVIRONMENT

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Abstract
The aim of this article is to highlight the Target Costing concept and the way in which the concept is used by the Romanian entities. The article analyzes the concept starting from the time of its appearance and up to the present moment, presenting the concept’s characteristics and its mode of action. A careful review of the specialized literature will be presented and the fact that this concept represents in fact a method of management. In order to study an eventual correlation between using Target Costing concept and the financial results obtained, an analysis of a sample of Romanian entities which produce shoes will be made. Also, it was analyzed the level of use and how much the Target Costing concept is known.

Keywords: Target Costing, Target Profit, Managerial accounting

Jel Code: M41

1. Introduction
The initial concept of Target Costing existed in Japan from 1960, being used by the Toyota company for the first time (Tanaka M., 1989; Tanaka T., 1993; Monden, 1995). The concept developed slowly because many companies implemented Target Costing as a response to external environment changes. But, once the competition intensified, Target Costing had a growing evolution being adopted by many companies and the methodological results have been improved.

From 1980’s Target Costing was recognized as a major factor for the superior competitive position of the Japanese companies, the occidental companies starting to do efforts to implement this way of approaching costs (Horvath, 1993; Ansari and colab., 1997; Feil and colab., 2004). The most significant event in using Target Costing in Japan was the economic collapse from 1990 and 1991. After this moment many companies realised how difficult it is to fulfil clients’ expectations in terms of low prices; they have updated the Target Costing methodology by significantly increasing the needed data to estimate costs more precisely (Kim and colab., 1999).

The Target Costing approach in U.S.A dates from the period after the Second World War, in a period of severe restraints in terms of resources, when the Americans created a concept of maximizing the attributes of a product, a technique called “value engineering”. This technique was later adopted by Japanese companies too (Leahy, 1998).

In 1960 the Japanese combined “value engineering” with the idea of influencing and reducing a product’s cost as early as possible, during its planning and developing (Buggert and Wielpütz, 1995). The first use of “value engineering” in Japan was under the name of Genka Kikaku, which was translated as Target Costing, a term that is used worldwide today (Feil and colab., 2004).

2. Defining Target Costing
The notion of Target Costing was approached by many authors, but there isn’t any consensus regarding what it represents yet.

Cooper (1995) defines Target Costing as being a method which helps companies to determine the cost of a product’s life cycle, without neglecting its quality and functionality, knowing and anticipating the wanted breakeven level and the selling price.
Tanaka M. and contributors (1997) refer to Target Costing as to a concept that has two forms of manifestation. The duality of Target Costing is taken from the producer’s and from the client’s point of view: first and foremost are the costs that it incurs the manufacturer, such as planning, designing, developing, manufacturing and selling costs; secondly are the costs borne by the buyer, such as maintenance, exploiting and elimination cost.

Hansen and Mowen (1999) think that Target Costing is an interactive process which repeats until it achieves the set objective (the target costing) or until the impossibility to achieve it is determined. They say that the safest form to establish a price is to start with what the market is willing to pay.

Seindenschwarz (1993) classifies the existing definitions into three categories, their content in connection with the notion of Target Cost being:

- market oriented (Hiromoto);
- engineering oriented (Sakurai and Monden);
- oriented to product functionality (Tanaka and Yoshikawa).

From our point of view the Target Costing notion implies an integrated mechanism where we can find the three mentioned orientations, as it follows:

- the basic characteristic of the target costing consists in its clear orientation towards the market, the estimation of the price being made taking into account the estimated price that can be obtained in future by selling the product on the market;
- establishing the target costing is not made by only taking into account the estimated price accepted on the market, its objective being that of analysing the characteristics of the new product planning and designing phases but also by using target cost to track and control the actual incurred costs;
- any resource economy must be made respecting the product’s functionality established by the client, otherwise any cost reduction will have a negative impact: the consumer may refuse the product;

From another perspective, Target Costing was viewed as being:

- a mechanism for cost calculation (Cooper);
- an instrument for cost control;
- a system of cost management (Caraiani and Dumitrana);
- a management method, “target costs management” (Feil and colab.).

Kato (1993) refers to Target Costing using phrases as “costs planning” and “costs protection system”; Dekker and Smidt (2003) are using phrases as “net basis price”, “reducing production costs”, “pre-calculus” and “direct costs feasibility study”.

We can use a formula to determine the Target Costing but we can’t find a formula to establish what needs to be done to achieve the Target Costing. So, Target Costing isn’t just a calculus method, it represents a philosophy of price fixing, a proactive cost approach, starting from the conviction that these are more easy to managed when the decisions are made during the designing of the products.

We believe that Target Costing doesn’t have to be seen as a cost calculus mechanism but as a management method which allows organising and adapting the entity’s activities and costs to achieve a performance level in accordance with the set objectives. So, Target Costing reunites a global concept of cost planning and management, used especially in the product’s designing stage with the aim to influence the structure of the costs, respecting the requirements of the market. Target Costing is a process which starts from the price that the consumer is willing to pay, this being the trigger element of the process.

We subscribe to the last approach (Target Costing as a management method) because we believe that is wrong to see the Target Costing just as a cost methodology or a management technique, its real significance being that of a philosophy of market and consumer orientation, helps orienting employees towards consumers and is based upon the idea that all departments of the entity have to work together. The Target Costing key to success lies in adopting its philosophy to all entity’s levels. So, Hasegawa (1994) considers primordial the possibility to align all employees to the mentality of the entity’s managers.

We define Target Costing as being a management method acting throughout the entire life cycle of a product, starting from the selling price that the market is willing to pay in compliance with the conditions of quality and time fixed and to which all departments are participating in an integrated and unitary manner.

3. The Characteristics of Target Costing

After a careful analysis of the specialized literature (Sakurai, 1989; Kato, 1993; Ansari and Bell, 1997; Cooper and Slagmulder, 1997; Ellram, 2002, 2006; Everaert and colab., 2006, Ibusuki and Kaminski, 2007; Briciu and colab., 2010) the fundamental characteristics of Target Costing are:
its potential can be found in the philosophy of the product’s life cycle and stretching for all the activities involved from conception up to the abandonment of the product; 

it presents a global vision of the product’s costs because it takes into account the costs generated in all product’s life cycle stages; 

tries to optimize the result throughout the lifetime of the product 

requires that the managers and cost analysts to constantly take into account a product’s costs (production, selling, shipping, post-selling etc.) during the designing process; 

has connections with medium and long term operations; 

its aim is to reduce costs as an essential objective in the most important stage of determination of final costs: designing and developing; 

it is an integrated process and includes all functional areas of the entity; 

it is a continuous process: throughout the product’s life cycle; 

it considers that is not valid to ask clients of an entity to adapt to products but the products of the entity have to be adapted to clients needs; 

determines which market necessity must be satisfied by the entity and identifies the characteristics of the product that meets the necessity; 

product’s selling price is established on the basis of some factors as: market share, market penetration strategy, the competition, market niche, elasticity of demand etc.; 

once the selling price accepted on the market is determined, the Target Costing is determined by lowering the desired benefit, a benefit established by the management during the strategic planning process of the entity; 

the implementation of target cost represents a breakdown of the costs incurred by the product; this breakdown must be made firstly between the different cost centres of the entity (acquisition, production, logistics, distribution, marketing, sales etc.), then every centre will detail costs by every component, material or service that enters in its responsibility; 

there are analyzed aspects like: is it preferable to manufacture or to buy some components or services and analysing those aspects that generate value added to the product; 

each activity costs, that is why is needed a well defined process which integrates activities and responsibilities to support Target Costing; 

once the product has entered the manufacturing line, a cost control and feed-back process is initiated; 

it implies a constant compromise with continuous improvement and so, a constant cost reduction; 

represents a dynamic system which allows and stimulates the creativity of the members of the multidisciplinary working team to find alternatives to constantly reduce costs; 

requires teamwork, compliance with the organization’s strategy and adopting the philosophy of continuous improvement in the workplace.

4. Target Costing and product’s life cycle

The current economic context generated by the new technological discoveries has caused a decrease in the life cycle of products. As a consequence of this fact, the entities must make quick decisions, the new products have to quickly be launched on the market taking into account that in some cases, the products’ life cycle is limited to several months.

Under these conditions, the entities realized the need for decreasing the time of the period between product’s designing and launching and optimisation of both product and process. They passed from cost planning to a conception based on the life cycle of the product. The product has to be effective taking into account that the incomes obtained during a life cycle to cover all the costs associated with its designing and production and up to product disposal costs.

Due to the globalization of markets and increased competition, the entities saw the need to diversify the offer of products resulting in a decrease in the life cycle of products. The decrease of the life cycle of the products has determined that the conceiving, designing, planning and launching activities are essential for a product’s cost management. The life cycle of the product can be looked at from two perspectives, as it follows:

1) the commercial perspective: refers to market behaviour in relation with the new product. It can be identified with the four stages: launch, growth, maturity and decline, each of these having an associated structure determined by the costs and revenues, with a temporal extension that depends on exogenous and exogenous factors to the entity;
2) production perspective: the life cycle is focused on the stages that follow from the time of conception of the product and until it is launched on the market and it involves the following phases: conceiving, designing, developing the product and the process, production and logistic.

According to the existing studies 85% of costs are involved with product design and manufacturing process (65% in the designing stage and 20% as a consequence of the configuration of the manufacturing process), even if in reality the designing stage involves less than 12% from costs. So, at the end of the designing stage it undertook the material cost, labour, manufacturing costs and some processes of marketing and customer services. That is why the most efficient way of cost management is focusing on reducing costs in the product conceiving, designing and planning activities.

It has to be mentioned that not all the time the costs are undertook at the beginning of the designing stage, there are industries, especially in the area of services, where the cost is committed and it is supported almost simultaneously (consultancy, legal services).

In general, when technological discovery rate increases, the life cycle of the products decreases, especially for the products that use advanced technology.

The Target Costing is more important for the products with a shorter life cycle. When a product has a long life cycle, there are many opportunities for continuous improvement in the design and manufacturing process. These opportunities are not available for all short life cycle products, which must receive special attention. For this kind of products a solution could be launching the product at a price that will ensure rapid market penetration.

5. Stages of Target Costing

The most common form of presentation belongs to the authors Cooper and Kaplan showing the steps of the Target Costing in a simple way:
1) The market determines the price of the future product.
2) Subtract from this price the profit margin that the company wants to achieve.
3) The target costing to which the product must be manufactured is obtained.

This form of presentation basically reduces Target Costing to a simple methodology of calculation, excluding its essence, the managerial component of the method.

A more elaborated phasing of the Target Costing is to be found in the approach of the authors Ax, Greve and Nilsson (2008), who, after an analysis of specialized literature present the following stages:
1) Identifying the wanted product and its characteristics
2) Establishing target price.
3) Determining target profit.
4) Determining target cost.
5) Target costing decomposition.
6) Recovering the cost difference.
7) Continuous improvement.

In this case the product is the central element of the model, its characteristics and specifications in relation with market condition, determining the capacity to generate value to the entity.

We subscribe to this approach, starting from the premise that cost target can be inferred only after have been determined the causal relationships in generating value which are defined for each product. Our opinion is that the value determines the cost, and a effective a priori fixation of activities is essential in achieving the targets.

From our point of view a correct approach of Target Costing has to be made starting from the conviction that the criteria that the market makes at any time should be the starting point of any economic approach. So, we consider that the activities of Target Costing have to answer the following questions:

- Who is the client? – Specifying the target market segment has to be the starting point of the method.
- What product does the client needs? – Type of product.
- What is the expected quality level? – Basis, medium, advanced.
- Which are the characteristics of the wanted product? – General characteristics of the product.
- What are the mandatory requirements that the product must have? – In their absence the product loses its value in the eyes of customers and thus it won’t be bought.
- When does the consumer need the final product? – Any overrun of the term set will lead to clients’ orientation towards the products of the competition or cancellation of the need as a result of the emergence of some factors such as technological advances, changing economic conditions, etc.
- Which is the price that the client accepts? – The value that the client attributes to the product is to be found in its functionality and in the price he is willing to pay.
Which is the expected profit? – The expected profit is the benefit that the entity expects to obtain by selling the product.

Which is the global Target Costing? – The Target Costing at the level of the product is determined by deducting the expected profit from the accepted selling price.

What is the Target Costing for the processes and components of the product? – The global Target Costing is decomposed for every process and component of the product with the aim of identifying improving possibilities.

What is the achievable cost of the product? – On the basis of the information available about similar processes in the current technological and productive context the current cost can be determined.

Which are the improvements that can be made? – The general objective is obtaining a product which reaches Target Costing but also keeps clients’ demands. The aim is to optimize the use of material, of relations between production processes and to identify ways to improve the existing methods and processes.

The Target Costing has to start by establishing the project team. The team must be multifunctional and to reunite the persons that are involved in the entire developing process of the product: cost accounting, engineering, projecting, marketing, acquisitions and sales.

Target Costing must be implemented from the top down, not from the bottom up; the management of the entity has to support and apply the Target Costing, and the appointed project team must be vested with power and authority recognized by the whole entity. Maybe a key to success of the Target Costing from Japan is also the fact that, as Alston (1986) says, “the group comes always before the individual”.

In terms of design methodology, the Target Costing development involves:

1) Product planning – the plan of a new product sums up to a document or a table that defines and clarifies the requirements of the project. Normally, the following aspects can be found within the plan:
   – the consolidation of the concept and use of the product;
   – basis functioning specifications, projection programming, marketing and production activities of the product;
   – target costing, (selling price, expected benefit) market studies;

2) Concept designing – are defined the basis concept, the normal selling price and target costing to be reached for the new product, using as basis the project’s demands. There are included the following aspects:
   – the formulation of key functions;
   – Target Costing allocation to the functions of higher level;
   – projecting the basis concept of the product taking into account the allocated Target Costing;
   – revising, using an estimation of the measure in which the basis concept of the product is designed to match the cost;
   – study of the profitability of the product;

3) Basis designing – drawing a general plan of the product based on target costing as it follows:
   – allocation of the target cost to the functions of senior and mid-level or to the main components;
   – building an overall plan based on target costing specifications;
   – revising, using an estimation of the measure in which the overall project matches the target costing.

4) Detailed designing – the manufacturing characteristics of the product are established on the basis of overall plan scheme and of target costing:
   – describing the details of the project (manufacturing specifications) from the target costing;
   – revising, using a detailed estimation of the measure in which the product is designed to fit target costing;

5) Preparing for manufacturing – the manufacturing system and product variations are designed and there are determined methods and manufacturing processes that make possible the achievement of target costing.

6. Research methodology

Starting from the characteristics of Target Costing, its advantages and disadvantages, the functions that it fulfills and the implementing methodology, we have proposed the study of entities from Romania which have as their object of activity the manufacture of footwear by verifying the following research hypotheses:

H1: The entities that use the Target Costing have positive financial result.
H2: Entities that don’t use Target Costing have negative financial result.
H3: Entities that have negative financial result do not use Target Costing.
H4: Entities that have a positive financial result are using the Target Costing.
H5: Most entities use the Target Costing.
H6: All entities are aware of the concept of Target Cost.

The research was made in December 2013 for the year 2012, to the level of population formed from the entities that activate in Romania and which have as their object of activity the manufacture of footwear, between the years 2008-2012. The mother population was composed of 499 entities, the data being obtained by using the following internet pages: www.totalfirme.com and http://www.mfinante.ro/agenticod.html

From the mother population were eliminated the companies that have dissolved in the analyzed period or they have suspended their activity. The remained population was studied in terms of financial results obtained in 2012. The entities were then placed on categories:

- positive financial results: which made profit;
- negative financial results: which realized loss.

From the remaining population we have extracted a 10% sample for each category using the table with random numbers so the samples to be obtained at random. Because there were entities that didn’t want to participate to the research (from both categories), the number extraction continued until we reached the wanted samples (10% from each category).

The entities from the two samples were studied by applying a questionnaire, and the obtained results were exploited to the level of the entire population, constituting the basis for the verification of the assumptions made.

7. Results obtained

In collecting data for the entities from Romania which have as their object of activity the manufacture of footwear, in the period 2008-2012, it was observed that at the level of the entire population of 499 entities we have:

- 114 dissolved;
- 63 suspended, that still have not resumed;
- 13 suspended, that have resumed;
- 309 entities that have operated continuously.

The situation is graphically presented in Chart no. 1 and Chart no. 2
Dissolved 23%
Suspended 13%
Suspended, resumed 2%
Continuous operation 62%

Chart no. 2: The situation of entities which have as their object of activity the manufacture of footwear in the period 2008-2012 (under relative form)

Chart no. 3: The situation of the entities which have as their object of activity the manufacture of footwear that have operated continuously in the period 2008-2012

From the 309 entities that have operated continuously for the year 2012, 147 made profit and 162 realized loss (Chart no 3).

The total sample was of 31 entities, 10% from the total of 309 entities that operated continuously in period 2008-2012, 15 of the entities made profit and 16 of them realized loss, and the results obtained by applying the questionnaire have been (Table 1):

Table no 1: The situation of the answers after applying the questionnaire depending on the category of respondents

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Category of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Entities that made profit</td>
</tr>
<tr>
<td>Answers</td>
<td>YES</td>
</tr>
<tr>
<td>1. Do you know the concept of Target Costing?</td>
<td>13</td>
</tr>
<tr>
<td>2. Do you use Target Costing in your activity?</td>
<td>5</td>
</tr>
<tr>
<td>3. Do you intend to use Target Costing in the near future?</td>
<td>8</td>
</tr>
<tr>
<td>4. Do you think that using Target Costing is beneficial for</td>
<td>11</td>
</tr>
<tr>
<td>the financial results obtained by the entity?</td>
<td></td>
</tr>
</tbody>
</table>

Analyzing the obtained answers the following information can be extracted: To the question Do you use Target Costing in your activity? There were questioned 31 entities: 5 of them answered YES and 26 of them answered NO. All entities that use Target Costing obtained profit in 2012, and from those that answered NO, 10 are entities that made profit in 2012 and 16 entities realized loss.

Graphically the situation is presented in Chart no 4 and Chart no 5:
Entities that use Target Costing

Entities that do not use Target Costing

Entities that made profit

Entities that realized loss

Chart no. 4: The situation of the entities according to the use of Target Costing and the financial results obtained

Chart no. 5: The situation of entities according to the use of Target Costing

Because all the entities that use Target Costing make profit (5 in our case) it results that the first hypothesis H1 is met: The entities that use the Target Costing have positive financial result is true.

Also we can see that not all entities that do not use Target Costing have negative result (16 entities realized loss and 10 entities made profit) so the second hypothesis H2 Entities that don’t use Target Costing have negative financial result is false.

Referring to the third hypothesis H3: Entities that have negative financial result do not use Target Costing we can say that it is true because all the 16 studied entities that have negative result do not use Target Costing.

The fourth hypothesis H4: Entities that have a positive financial result are using the Target Costing is false as it can be observed on the graphic, 10 of the entities that made profit do not use Target Costing.

The fifth hypothesis H5: Most entities use the Target Costing is false as we can see in Chart no 5, on the data processed from table 1 only 19% from the studied entities use Target Costing.

To the question Do you know the concept of Target Costing?, from the 31 questioned entities, 23 know the concept and the methodology of application and 8 entities do not know it. From the entities that know the concept, in 2012, 13 of them made profit and 10 realized loss, and from those that do not know the concept 2 of them made profit and 6 of them realized loss. The situation is graphically presented in Chart no 6 and Chart no 7:
Entities that are aware of Target Costing
Entities that are not aware of Target Costing
13
2
10
6
Entities that made profit
Entities that realized loss

Chart no. 6: The situation of the entities according to the use of Target Costing and the financial results obtained

Chart no. 7: The situation of entities according to the knowledge of the concept of Target Costing

From graphical representations we can see that most of studied entities (74%) are aware of the Target Costing concept, the larger share being that of entities that made profit. So the sixth hypothesis H6: All entities are aware of the concept of Target Costing is false, because 24% from entities are not aware of the Target Costing concept.

8. Conclusions, limits and proposals for future research

The current business environment is characterized by intensification of competition to a global level, the fastness of technological discoveries, environment and safety problems, the consumers need for all innovative, high quality and reasonable price products.

The survival and development of an entity in such a provocative environment depends on its capacity to answer to market demands and satisfy clients’ wishes regarding the price and quality.

The management accounting has continuously evolved and as a response to the change of the business environment it proposes the Target Costing as a method of strategic management of costs which will strengthen the competitiveness of an entity in the face of the current economic challenges.

Target Costing success factors are the cost, quality, innovation and time, factors that are optimized especially in the stage of developing and designing the product by involving a multifunctional team of the entity and the members of the value chain, especially the suppliers.

Analyzing the presented data we can affirm that the use of Target Costing assures that the entity will obtain positive financial results, fact demonstrated also by the research that has been made on Romanian entities which as their object of activity the manufacture of footwear.

As we saw in the data obtained, all the entities that implemented Target Costing made profit, confirming in this way the advantages of Target Costing presented in the theoretical part.

Taking into account the economic stage and the current specific conditions, we recommend Romanian entities to use the Target Costing to assure competitiveness on the market, the main advantage of the method being the orientation towards the client and its needs, being known that at the moment the demand is the one that triggers the production and not the other way round.

The limits of the research are the small size of the sample studied, and in exploiting the data errors could be done. Also, the research was made only for the entities which have the same activity object (manufacturing of footwear) which can influence the conclusions obtained by certain elements specific to the field in question.
Another research limit is the temporal variable, the study taking as basis only the data from 2012 referring to financial results without ensuring data continuity over time, their evolution from the moment of implementing Target Costing until the present moment.

As future research it could be studied the relations between Target Costing and the incertitude level, the size of the company, investors’ nationality, turnover level, profit level, the fierce competition etc.

Also it would be interesting to find out the opinion of those who implemented Target Costing on its benefits and if there are entities that used Target Costing and stopped using it.

Another research direction can be constituted, for the entities that implemented Target Costing, by the factor that stimulated them to make this decision (external or internal factors?).

We hope to undertake all these research directions in a future study in order to help to a better knowledge of the benefits of Target Costing and to a better understanding of its correct implementation.

9. References

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