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COSTS CALCULATION OF TARGET COSTING METHOD

Case study

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Cost information system
Production cost

JEL Classification
C50, M40, M41

Abstract

Cost information system plays an important role in every organization in the decision making process. An important task of management is ensuring control of the operations, processes, sectors, and not ultimately on costs. Although in achieving the objectives of an organization compete more control systems (production control, quality control, etc.), the cost information system is important because monitors results of the other. Detailed analysis of costs, production cost calculation, quantification of losses, estimate the work efficiency provides a solid basis for financial control.
Knowledge of the costs is a decisive factor in taking decisions and planning future activities. Managers are concerned about the costs that will appear in the future, their level underpinning the supply and production decisions as well as price policy. An important factor is the efficiency of cost information system in such a way that the information provided by it may be useful for decisions and planning of the work.

Introduction:

Management accounting is an information system that collects and processes information in order to assess and manage the organization's business performance. Theoretically, the objective target-costing is based on the following principles:

- costs of future products is evaluated from the future series of the marketing predicted income;
- necessary target costs based on full cost formula are evaluated by cutting the selling price of a desired margin of profit, taking into consideration a quota of the risk (component of the cost);
- the overall cost is determined by the difference between the selling price and desired margin, plus the share of the risk is distributed to different parts of the products corresponding to the to the functions to customers;
- the cost of product components serve as the task for the whole of value creation chain, from research and development and continuing with supply, production and marketing;
- by analyzing the differences between target costs and standard the cost identifies at the level of the product component the optimization of the potential.

Competitiveness in the current economic environment presents a challenge to the field, because its tools are heavily influenced by contingent factors (historical, cultural, technical, etc.). Management accounting is an important part of the instruments that provide performance management. (Atkinson et al., 1997)

The manager expects from the management accounting a permanent assistance before, during and after the action, in order to define objectives, to understand whether the objectives are relevant and to measure performance. (Bhimani& Bromwich, 2003)

Control and decision-oriented costing calculation is one of the basic components of a profitable management mechanism for the company. Also, as an informational tool the calculation "produces" and provides information on costs and profit, and as a management tool is a technique for deciding on maximizing profitability.

Costing shouldn't be seen as an actual goal, but as a source of providing information in the domain, having the determinative role for ensuring a modern company leadership. Thus, information system cost occupies a central place in the economic information system.

Depending on the methods used, cost calculation is able to meet these requirements and provide information on past, current and future costs. (Dumbravă& Pop, 1997)

Possibilities of application of target costing method - Target Costing

Target cost method (Innes, 2009) is part of a strategic management approach products, where cost carrier is analyzed throughout its life cycle and especially in its conception phase.

Matrix Target cost calculation represents "value engineering" as defined by a Lawrence Miles in his "technical analysis and value engineering" which notes, "without determining the costs implicated, decisions will not go and will not ever get to achieve an corresponding value." (Morse et al., 2000)

So to be performing, interest cannot be restricted to the production of value in the technical and functional, they must consider product functions through the cost involved in terms of a given price. In a generally accepted as his work emit from LW Crum - "Value Engineering" (translation from English, Technical Publishing House, Bucharest, 1976) - "value engineering consists of a series of systematic processes oriented towards the functions necessary at a minimum cost, without neglecting quality, reliability, performance and delivery." (Tabară& Briciu, 2012)

By reference to the value engineering, Target Costing is a formalized approach oriented functional analysis of the report value-price-benefit-cost.

Analyzed as a unitary concept and the closed by cost management, Target Costing is characterized by estimation of the functions of selling prices, the full costs and benefits of whole life cycle of the product.

Such a management is maintained throughout the product life cycle; focus on the during the development phase - the product design; based and uses the information from the market prices and the costs based on the information market-oriented; budget is based on a product's function; valuation basis is the full costs. (Tabară, 2006)

Target costs are based on the rule that the market dictates selling prices and not the costs of companies. So to build profitability, must walk to the cost at price, provided that the sale price should cut the margin required to reduce the cost target. Because the market is not interested in the cost structure of their fixed and variable costs and individual or common costs is necessary to cover all costs of long term company. Accordingly, the sales prices of products must ensure full costs and a profit margin.

The general equation of the target cost is:

Selling price required - desired margin = complete target cost (Sea et al., 2006)

Objective of Target Costing method was formulated as follows: "improve the situation related results produced by a reduction standard cost towards goal costs in accordance with the competitive situation."

Next we show you a model costing method Target Costing at the Maintenance and Modernization Aviation Division of the Company SC Aerostar S. A.

The study has established the following:

- Report that criticizes the common inducers is 1/7 for each product;

- There are no items in stock neither at the beginning nor at the end of the reporting period.

Designers focus on design change of product made to arrive at a cost estimate to the nearest target cost (Table no. 1).

The first step is to identify the nature of the indirect costs for each product produced.

Their analysis resulted in the identification of indirect costs allocated to the manufacture of products. Next we proceeded to establish centers of cost delimitation and identification of related indirect costs, activities and costs for each activity and the final volume cost drivers, sized according to the conditions of production (Table no. 2).

Table no. 3 is seen that the data obtained for the estimated costs for products produced are the same as those shown in Table no. 1, the estimated cost and estimated profit have values very close to target cost respectively target profit.

The cost reduction estimated to reach the cost target - through a sequence of steps.

In the section, forming a team, dealing with cost reduction for this purpose are acquired raw materials and consumables at lower prices, which are designed and assembled to develop new design ideas. Value engineering search new models that have the same functions at a lower cost, being eliminated undesirable functions.

Another step is the team of specialists analyzed the characteristics (power consumption of the fuel, weight, and noise) for each product produced. Through dialogue with customers have identified situations where a change in these characteristics increase (or reduce) the cost of more (or less) than the increase (or decrease) the price the customer is disposed to pay. (Scarlet, 1996)

After these changes, the team of specialists deals with product design that involves changes in the manufacturing process. The team tries to identify new ways of manufacturing and assembly. Together with suppliers, the team adopted a JIT supply system and reorganizes the production line moving from lots to vision orientation in flux. These changes were aimed at eliminating costs that do not add value and improvement of activities that bring added value.

Conclusions

Target costing method is part of a strategic management approach products, with a cost carrier analyzed throughout its life cycle and especially in its definition phase.

Cooper (1992) shows that the objective of the target cost is to identify the production cost of a product so that, once sold, it will generate an expected profit margin. In this context, the role of management accounting is to provide cost estimates for the various prototypes of products, as well as to evaluate and monitor costs after start of production. Importance TC model is that sets out the product design stage. So most of the costs are "locked" or encountered in the first part of the product life cycle. Once the product is released to manufacturing are much more difficult reductions significant cost, although some of them are possible (for example, learning effects over time).

In these conditions, the target costs, which are a form of life cycle cost of the product, are an example of feed-forward control.

Competition in large markets with quick movements, sophisticated, can therefore be combated only by using AMT environments. This leads to increased production capacity of the company resulting in high quality goods at low cost and thus making a high level of satisfaction of customer requirements.

Companies need to be innovative and flexible, able to obtain products with short life cycle, providing a greater variety of products, while maintaining or reducing costs. They also aim at reducing time to repair and storage periods, with the greatest possible flexibility in production in terms of using AMT. (Smith, 2006)

In conclusion, the method cost-target (Target Costing) is part of the strategic management approach of the products, where cost carrier is analyzed for the duration of its life cycle and especially during its conception.

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Table no. 1. The calculation element

No. Crt .	Explanations	Jamba niche outer hatch	Jamba outer main	Jamba central main hatch	Jamba inner hatch main	Nickel Cadmium Battery	Nickel Cadmium Battery Type 4579	Overall Passenger seat
0	1	2	3	4	5	6	7	8
1	The estimated production	1.500,00	1,500,00	1700,00	1600,00	5250,00	5250,00	1200,00
2	The average price target	350,00	300,00	250,00	270,00	120,00	120,00	350,00
3	Profit target	105,00	90,00	75,00	81,00	36,00	36,00	105,00
4	Target cost	245,00	210,00	175,00	189,00	84,00	84,00	245,00
5	The purchase cost of raw materials	75,00	55,00	40,00	49,00	20,00	20,00	60,00
6	The acquisition cost of consumables	69,00	54,00	45,00	45,00	32,00	32,00	52,00
7	Indirect expenses	101,32	101,39	89,76	95,05	32,44	32,44	132,69
8	The estimated cost	245,00	210,00	175,00	189,00	84,00	84,00	245,00

Source: own calculations performed based on the data taken from www. Aerostar.ro

Table no. 2. Costs and volume inductors necessary of indirect costs

Activities	Cost drivers	Cost Inductor	Volume Inductor						
			Jamba niche outer hatch	Jamba outer main	Jamba central main hatch	Jamba Inner hatch main	Nickel Cadmium Battery	Nickel Cadmium Battery Type 4579	Overall passenger seat
Research	Number of hours	38,77	40,00	45,00	40,00	35	30,00	30,00	44,00
Study suppliers	Number of suppliers	183,51	4,00	4,00	4,00	4	6,00	6,00	7,00
Ordering materials	Number of orders	11.510,20	5,00	5,00	5,00	5	5,00	5,00	5,00
Stocks	Number of references materials	85,44	5,00	4,00	5,00	5	8,00	8,00	5,00
Preparation and launch into production	Number of lots	1.018,28	3,00	3,00	3,00	3	9,00	9,00	10,00
Manufacture	Direct labor hours	142,84	503,00	503,00	503,00	503	503,00	503,00	503,00
Marketing of products	Number of products	2,99	1.500,00	1.500,00	1.700,00	1600	5.250,00	5.250,00	1.200,00
Administration and finance	Cost added	0,05	X	X	X	X	X	X	X

Source: own calculations performed based on the data taken from www. Aerostar.ro

Table no. 3. Estimated cost calculation

No.	Explanations	Jamba niche outer hatch	Jamba outer main	Jamba central main hatch	Jamba inner hatch main	Nickel Cadmium Battery	Nickel Cadmium Battery Type 4579	Overall passenger seat
0	1	2	3	4	5	6	7	8
1	Sales volume	1.500,00	1.500,00	1.700,00	1.600,00	5.250,00	5.250,00	1.200,00
2	Target price	350,00	300,00	250,00	270,00	120,00	120,00	350,00
3	Raw materials	75,00	55,00	40,00	49,00	20,00	20,00	60,00
4	Expenditure on consumables	69,00	54,00	45,00	45,00	32,00	32,00	52,00
5	Indirect costs due to:	151.975,16	152088,5082	152600,341	152085,039	170333,53	170333,5299	159229,8972
	Research	1.550,61	1.744,43	1.550,61	1.356,78	1.162,95	1.162,95	1.705,67
	Study suppliers	3.224,49	3.224,49	3.224,49	3.224,49	3.591,51	3.591,51	3.775,02
	Ordering materials	57.551,00	57.551,00	57.551,00	57.551,00	57.551,00	57.551,00	57.551,00
	Stocks	3.600,69	3.515,25	3.600,69	3.600,69	3.857,01	3.857,01	3.600,69
	Preparation and launch into production	3.054,83	3.054,83	3.054,83	3.054,83	9.164,48	9.164,48	10.182,75
	Manufacture	71.850,29	71.850,29	71.850,29	71.850,29	71.850,29	71.850,29	71.850,29
	Marketing of products	4.483,42	4.483,42	5.081,21	4.782,31	15.691,96	15.691,96	3.586,73
	Administration and finance	6.659,84	6.664,81	6.687,24	6.664,66	7.464,34	7.464,34	6.977,76
6	The total estimated cost	245,32	210,39	174,76	189,05	84,44	84,44	244,69
7	Profit / loss estimated	104,68	89,61	75,24	80,95	35,56	35,56	105,31
8	Profit target	105,00	90,00	75,00	81,00	36,00	36,00	105,00
9	The difference between the expected profit and profit target	-0,32	-0,39	0,24	-0,05	-0,44	-0,44	0,31
10	Target cost	245,00	210,00	175,00	189,00	84,00	84,00	245,00

Source: own calculations performed based on the data taken from www. Aerostar.ro