

Target costing: exploring the concept and its relation to competitiveness in agribusiness

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Abstract

How can the practice of Target Costing enhance agribusiness competitiveness? Though the management accounting literature has been enriched by various artifacts such as ABC Costing, Product Life Cycle Costing, Total Cost of Ownership and Target Costing, there is still need for managers to understand how these artifacts may increase the ability of agribusinesses to compete in a hypercompetitive environment. In this essay, the concept of Target Costing is explored as a managerial accounting artifact as its various definitions, distinctiveness and applicability as an organizational and managerial process are discussed. Then, it is argued how it should contribute to building competitive advantage in an uncertain and increasing competitive environment, specifically but not restricted to the agribusiness industry. It is concluded that Target Costing should be of great importance in aiding the development and marketing of innovative food products by small agribusinesses.

Keywords: Target Costing, Strategic Cost Management, Competitive Advantage.

1. Introduction

One of the main tasks of management accounting academics is to understand the environment in which management accounting is practiced so that assertive commands should be introduced in decision-making to enhance organizational competitiveness. According to authors such as Kaplan and Norton (1996) and Waweru et al. (2004), a number of changes have impacted the management accounting praxis in the last three decades, i.e., advances in information technology, highly competitive environments, economic recession, new management strategies, and a new focus on quality and customer services. These changes have posed many challenges for managers from a competitive perspective: (1) Advances in information technology have allowed a continuous flow of data and information for the right managers at the right time for decision making; thus, the timing has become increasingly important for competitiveness since it allows decisions to be made assertively and earlier than competitors; (2) In the context of highly competitive environments, in many industries, innovation requires rare skilled professionals and as a result, companies compete for them; on the other hand, the more technology and know-how become available, the less restrictive entry barriers are; (3) In an economic recession scenario, a better alignment between customer expectancies is required. In this way, decisions concerning the choice of markets and respective strategies must be thoroughly revised; (4) In face of deregulation, governments are pressured by corporations and economic groups for improvements in trade barriers or restructuring of industries' legal requirements; this, in turn, causes huge bureaucratic structures as well as small businesses to compete in the same arena of dynamic and innovative companies; (5) New management strategies become increasingly important. As uncertain economic scenarios arise, companies are motivated to incorporate new management strategies in order to improve processes but also as ways to reduce uncertainty or increase strategic competence; (6) Quality and customer services have become key competitive criteria. Products are less and less accountable for customer perceived value; services, on the other hand, have increasingly become the source of value creation (GEBAUER; FRIEDLI, 2005). Thus, in order for companies to compete, product quality

(attributes most valued by the customer) is requisite (BIEDENBACH; SÖDERHOLM, 2008; WAWERU et al., 2004).

In the context of manufacturing, Davila and Wouters (2004) argue that since innovations are ubiquitous in major organizations of an industry, one of the main sources of competitive advantage turns out to be product development and this occurs mainly due to economies of scope (BESANKO et al., 2003). This same perspective is not restricted to manufacturing; sectors such as agribusiness are currently witnessing great challenges (HERATH et al., 2010; ROUCAN-KANE et al., 2011), especially in a context of strategic uncertainty and structural change, in which innovation is crucial (BOEHLJE et al., 2011). One important managerial approach that supports this innovation strategy is cost management, specifically target costing. Target costing may be understood generally as an artifact employed during product development processes with an integrative focus, thus promoting a systemic approach toward new products and processes (COOPER; SLAGMULDER, 1999; EVERAERT, et al. 2006).

The purpose of this essay is to explore and discuss target costing as a managerial accounting artifact, considering its various definitions, how it can be put into practice by means of a managerial process, and discuss how it can play a leading role in the search for competitive advantage. With this essay, we expect to disseminate target costing as a relevant tool for entrepreneurship and competitiveness, especially in the context of agribusiness, as well as facilitating its implementation by the various actors in an organizational setting.

2. Exploring Target Costing and its Relevance

According to Wheelwright and Clark (1992) and Davila and Wouters (2004), most of the profits that a certain product is expected to generate is well-thought-out during the product planning phase of product management, that is, before it is distributed or marketed. This assumption is also present in the capital budgeting literature and it has to do with the fact that during development phase, management should keep in mind the features or attributes that “(1) give the product an edge over competing offerings and (2) affect the costs that will shape profit margins” (DAVILA; WOUTERS, 2004). They also consider product design to be a key driver of revenues, not only through customer appeal, but also through technological performance and careful timing for its introduction into the market. Product design also affects costs: “as a rule of thumb, 80 percent of the costs are engineered in during product

development” (COOPER; SLAGMULDER, 1999; DAVILA; WOUTERS, 2004), even though there is still little field research on this matter.

The literature considers the origins of Target Costing within the military context, in the United States Department of Defense, which was used as a rule of thumb to define tolerable levels of cost over a life cycle of weapons development (MICHAELS; WOOD, 1989; EVERAERT et al., 2006). This antecedent of Target Costing was called Design-to-Cost, a tool extremely necessary to carry on military projects under limited budgets. An important difference between these two concepts, is that while Design-to-Cost seems to focus on internal matters, such as limited budgets, Target Costing encompasses more variables such as product life cycle, market, and competition. Etymologically, Target Costing is considered a mistranslation of what is called Genka Kikaku in Japanese, meaning “cost planning;” earlier publications have used expressions for Target Costing such as “cost planning” and “cost projection systems” (EVERAERT et al., 2006; KATO, 1993). Moreover, Dekker and Smidt (2003) found other names in use, such as “basic net price,” “manufacturing cost reduction,” “precalculation,” and “direct cost feasibility study”.

Unlike full costing, direct costing or Activity-Based Costing (ABC), Target Costing is not a costing system. Everaert et al. (2006) elucidates that Target Costing is “a cost management technique used during new product development (NPD)” in which “a cost target is set for a new product and the NPD team is motivated to attain that target before product launch”. This definition, however, lacks important considerations: it only considers the development phase of the product; it deals solely with the aspect of target cost; finally, it does not explain by which means Target Costing is achieved within the organization. To Cooper and Slagmulder (1999) it “is primarily a technique to strategically manage a company’s future profits. It achieves this objective by determining the life-cycle cost at which a company must produce a proposed product with specified functionality and quality if the product is to be profitable at its anticipated selling price” (COOPER; SLAGMULDER, 1999). From this definition, there are also two limitations: Target Costing is not a technique by itself, but a managerial artifact from which management can make better or more assertive decisions; also, in the way it is expressed, it does not mention how it can be achieved in the organizational context. Ansari et al. (1997) define target costing as a “system of profit planning and cost management that is price led, customer focused, design centered and cross-functional”. Furthermore, the author adds that target costing “initiates cost management at the earliest stages of product development and applies it throughout the product life cycle by

actively involving the entire value chain”. From this definition three important aspects about Target Costing should be pointed: its focus on customers and the market; the product or service design at the heart of this artifact in accordance with the product life cycle; and the involvement of different functional areas of the organization, as well as the value chain, both necessary efforts in order to convert strategy into action. However, it is not essentially a system, though a system may be generated from the use of target costing.

From the aforementioned definitions and critiques, a fourth one, encompassing key aspects of Target Costing may be stated: a cost management and profit planning artifact that involves the setting of cost controls based on market prices and customer preferences, integrating different functional areas of the organization or different organizations around product and services projects.

For Cooper and Slagmulder (1999), Target Costing allows companies to “prevent costs during design rather than reducing costs after the fact”. In this way, it keeps management focused on strategic issues rather than in activities aimed at fixing strategies or operations, but at the same time, emphasizes the fundamental role of controlling. According to Cooper and Chew (1996), Target Costing also contributes to securing profitability levels in a continuous time frame once “products that show up as low-margin or unprofitable during NPD can be quickly dropped” and thus, only projects with high success probability are chosen.

Target Costing may bring two important groups of people together: on the one hand engineers, researchers and managers, that is, the main people directly involved with technical aspects of the product, from its conception to market testing, and the customers, who are willing to pay for that product according to their attribute and prices preferences. Target costing is then concerned with “features, quality and time issues early in the process and to balance cost and features against customers’ willingness to pay for all these” (ANSARI et al., 1997).

With Target Costing, the efforts of cost management migrate from production to planning and development, which makes easier and cheaper to manage costs in comparison to a product already introduced in the market. This also ensures desirable or at least predictable levels of cost for a certain product or life cycle phase. For this reason, research and development (R&D) spending might be better valued, once it helps identifying and projecting with relative certainty the cost levels of innovative products. Furthermore, to Anderson and Sedatole (1998) and Davila and Wouters (2004), *ceteris paribus*, any project aimed at

lessening costs after the introduction of a product into the market raises quality issues for management.

Although a very useful managerial artifact, Ansari et al. (1997) and Davila and Wouters (2004) consider its effectiveness, especially when product costs are crucial to its success and also when cost modeling is viable and significantly simple. In addition, Cooper and Slagmulder (1999) emphasize the need for it to be a disciplined process in order to be effective. However, “as cost models become more complex and engineers focus their efforts on solving cutting-edge-technology problems under demanding time and budget constraints, the benefits of target costing may be less significant” (DAVILA; WOUTERS, 2004).

3. Target Costing as an Organizational Process

Cooper and Slagmulder (1999), supported by Böer and Ettlie (1999), Brausch (1994), Everaert et al. (2006) and Fisher (1995), consider three major sets of procedures for target costing that should delineate it as an organizational process: Market-driven costing, Product level costing, and Component-level costing.

Market-driven costing is obtained through a list of five steps:

- I. Set the company's long-term sales and profit objectives, highlighting the primary role of Target Costing as a technique for profit management.
- II. Structure the product lines to achieve maximum profitability.
- III. Set the product's target selling price, i.e., the price at which the product is expected to sell when launched.
- IV. Establish the target profit margin the company must earn on the product to achieve its long-term profit objectives.
- V. Calculate the allowable cost by subtracting the target profit margin from the target selling price.

Discipline is understood by Cooper and Slagmulder (1999) as “forcing alignment with the marketplace and requiring a new level of specificity about what customers want and what prices they are prepared to pay”. For this reason, market analysis and marketing strategies are crucial for determining the allowable costs. They state that Target Costing Systems “use these allowable costs to transmit the competitive cost pressures that the company faces to the product designers” and so, “product-level target costing disciplines and focuses the product designer's creativity on achieving the cost aspect of this objective”.

After product-level target costs are set for an individual company, it is necessary to go further and break down these costs into the component level; in this way, the costs are transmitted to suppliers. Suppliers, sequentially, should focus on discovering ways to design and manufacture its client's externally sourced components and parts under the criterion of obtaining satisfactory rates of return with the selling of such components and parts to its client. As a result, "component-level target costing helps discipline and focus supplier's creativity in ways beneficial to the buyer" (COOPER; SLAGMULDER, 1999).

Product-level costing considers a second set of procedures:

- a) Establish the attainable product-level target cost.
- b) Control the target costing process so that the target cost is met wherever feasible.
- c) Accomplish the product's cost in accordance with the target level, but always setting functionality and quality as key objectives, through the use of value engineering and other engineering-based cost reduction techniques.

A third and final major set of procedures concerns component-level costing. Like the product-level costing, it comprises three procedures:

- a) Identify major functions or subassemblies that provide functionality to the product or service and decompose the product-level target cost according to this criterion.
- b) Establish component-level target costs.
- c) Manage suppliers: select suppliers and reward them according to their creative ways in reaching cost reduction of components supplied.

Additionally, Cooper and Slagmulder (1999) argue that "even though the product level target costing process cannot begin in earnest until the company establishes the allowable cost", the organization can initiate complementary activities related to market driven costing like identifying current costs and have suppliers engaged around it. There is also a continuous task of going back to the field and apply marketing research in order to better align product functionality and quality and target selling price.

4. Target Costing and Competitiveness

Before analyzing how target costing should enhance a business's ability to compete in the long run, it is important to understand what makes it fit for a given business. Davila and Wouters (2004), for example, mention two aspects that drive the use of cost management (and its approaches) in product development: (1) circumstances in which criteria are more relevant

for management than product costs themselves and (2) when it is difficult to model the cost behavior of shared resources. From these considerations, Target Costing should be a more effective artifact in businesses that draw heavily on intangible resources and capabilities (allowing flexibility) and that are positioned in providing specific products or services based on key purchasing criteria or attributes that put the product or service in a place of distinction in comparison to those of competitors.

Literature shows a consensus that deliberately or not strategy is guided by competitive advantage, the ability won through attributes and resources to obtain superior performance in relation to other players in the same industry (HITT et al., 2005; PORTER, 1980; PORTER, 2008). Correspondingly, it is said that a business possesses a competitive advantage when it implements a value creating strategy that is not being simultaneously implemented by any other actual or potential competitor (BARNEY, 1991). Coyne (1986), in addition, argues that competitive advantage is only relevant when it helps it achieve organizational goals and when it promotes genuine lasting benefits. Specifically, this relevance is witnessed when three distinct conditions are evidenced: (1) when clients perceive a consistent difference in key attributes in a certain product or service of a business from those of competitors; (2) when such difference is the direct consequence of capability differences between the business and its competitors; and (3) when there is expectation that differences between both important attributes and capabilities persist over time (COYNE, 1986).

If a business, then, implements and uses Target Costing and expects it to be key to competitive advantage, target cost should push organizational capabilities to align products or services to specific market demands or, better yet, it should be an effective vehicle to translate market demands (worth responding to) into functional products or services and make sure they will also be aligned to these changing demands over time. This means that Target Costing should contribute to the processes of product and service adaptation, creation and structuring based on market changing demands. This innovative approach also considers time-to-market. At times, a business response to certain market demands already places them in a position of advantage; to others, anticipating market demands or creating them is crucial in gaining that advantage and it should require additional capabilities and a superior ability in managing time-to-market.

Successful product or service adaptation, creation, structuring and launching to market pulled by target costing may demand complex negotiations with suppliers and, if competitive advantage is to be gained in the long run through the creation of superior product or service

delivery (value chain leadership), it is reasonable that a business would have its bargaining power with its suppliers increased. Alternatively, it may put the business in better bargaining conditions with customers: if on the one hand Target Costing may reduce quality problems, cycle time and product cost, on the other hand, by offering distinguished products in terms of quality and superior performance and convenience (based on specific market demands), the business may charge a premium price for such value (even if target costing is based on market prices). Coyne (1986), to illustrate this situation, argues that for a business to explore the potential of a competitive advantage in a product segment or market, there should be significant differences perceived by the market reflected in some product or attribute delivered, a key buying criterion. Likewise, the product or service should be sufficiently differentiated in order to gain loyalty of a significant group of buyers/clients.

Traditional measures used to evaluate the degree of competitive advantage or competitive scorecards to a business are market share or profitability (DRUCKER, 1998; PORTER, 1980; KREPS, 2004, p. 479). Day et al. (1997, p. 60), however, acknowledge the use of other performance measures such as customer satisfaction and customer loyalty; these measures reflect customer responses to business positioning more directly. A clear innovation policy facilitated by target costing should promote customer loyalty. If target costing is used to accelerate the pace with which products or services are innovated (create, radically changed or gradually changed) based on specific functionalities or attributes demanded by a market, and if such pace is perceived to be superior than that of competitors, the business is being successful in associating its brand with key purchasing criteria such as quality, sophistication, usefulness, etc.

Lastly, innovation and customer loyalty, fundamental components of brand equity should create entry barriers to other competitors. The former two components, however, are generally achieved in the long run and, thus, target costing should be an integral part of an organization's culture. The main competitiveness issue in this argument is how well (effectively and efficiently) a business can incorporate a Target Costing philosophy into its culture in relation to competitors. This incorporation, in turn, may yield more assertive market demand predictions, more commitment in modifying internal processes as well as into negotiating terms with suppliers and establishing cooperative strategies.

5. Managerial Limitations

Target Costing is also criticized mainly due to managerial applicability. Davila and Wouters (2004) list four limitations of this tool, which may affect its premises of fostering competitive advantage, although they are not necessarily consistent in the literature.

Firstly, there is an argument that Target Costing focuses excessively on cost drivers and tends to ignore revenue drivers such as time-to-market technology or considering changing customer needs. These issues seem to be much more relevant than product cost drivers in high-technology industries. Thus, since target costing is bound to the product development process, managerial attention tends to ignore critical success factors and privilege cost drivers.

The second limitation of target costing is that it is time demanding, especially when time-to-market and technology are fundamental to profitability. In such context, product development teams are not able to focus on alternative searches and estimate their cost effect to the final product/service, and choose the one that minimizes costs (DAVILA; WOUTERS, 2004; KOGA, 1999).

Third, target costing may be too linear and bureaucratic. The various procedures involved in it, from assessing customer needs to applying value reengineering techniques to achieve the target cost, may represent a bureaucratic process, and thus, the necessary iteration in all these stages to assure the best minimum cost alternative would be ignored.

Finally, the level of detail in target costing is another limitation. Like Davila and Wouters (2004), Ansari et al. (1997) and Cooper and Slagmulder (1999) express the need for complex cost models such as ABC costing and Life Cycle Costing applications in order to capture the entire value chain. Furthermore, in hypercompetitive environments, these applications usually reflect current processes instead of prospect processes mandatory for product development decisions. In this way, there should be time dedicated to the development of capabilities, especially those related to teamwork.

In response to the aforementioned arguments, Davila and Wouters (2004) state that target costing is more useful in stable industries in whose product life cycles can be easily forecasted and where pricing is clearly established. Furthermore, technological changes need to be fully understood and product costs should be very important to organization's profitability. Hence, Target Costing should be very appropriate for small agribusiness firms as

their product are commoditized. Furthermore, technological changes are quickly disseminated.

6. Conclusion

The purpose of this essay was to discuss Target Costing as a managerial accounting artifact, considering its various definitions, its use as an organizational process, and analyze how it should promote competitive advantage to businesses, in this case, to small agribusiness firms. Although there is a relevant body of research on Target Costing, many questions are still in need of clarification, especially its linkages to competitive advantage such as its implementation in various organizational contexts, how it can improve a business time-to-market, which organizational capabilities are more demanded to link this artifact to attainable strategies, which industries would be more inclined to use target costing and how managers perceive its benefits, how to improve the relationship between total cost of ownership (from the consumer's point of view) to target costing (from the organization's point of view); and, finally, which incentives are the most effective in implementing and institutionalizing it. In this case, in reviewing the aforementioned theoretical aspects, key contributions to small agribusiness firms are presented in the ensuing lines.

Cooper and Slagmulder (1999) affirm that Target Costing allows firms to “prevent costs during design rather than reducing costs after the fact”; in this way, small agribusiness firms, while adopting this artifact will inevitably incorporate a deliberate strategic approach to product and process management in a commoditized industry, in which a cost approach is essential. In many cases, the choice for a strategic orientation would already be a differentiation aspect.

The concerns toward product features, quality and time issues as well as a focus on customers' preferences in Target Costing may be a further step in engaging these firms in offering more functional products; innovative and functional products may be differentiated in many ways as opposed to plain, commoditized products, generally offered by large agribusiness firms. Thus, responsiveness to customers' preferences and key product characteristics as well as a differentiation strategy via special products and brand positioning are movements paved by Target Costing. Such arguments are very plausible as small agribusiness firms present a simpler organizational structure and should be more agile in strategic actions.

However, as component-level target costs are set, such firms may encounter difficulties in negotiating with suppliers. Due to their low bargaining power, small agribusiness firms may face relevant decisions such as pooling strategies or strategic partnerships aimed at increasing bargaining power with suppliers or even vertical integration as a way to have full access to important raw products. This should be a very problematic issue in this context.

While Target Costing may assist differentiation strategies or strategies toward niche markets, small agribusiness firms should increase their above average returns in face of competition of larger firms. As long as organizational goals and product benefits are lasting (mainly associated with reliable quality standards), competitive advantage should be obtained. These conditions, in turn, are essential for branding initiatives and, as a result, entry barriers should be increased.

Though there are limitations, the implementation of a culture based on strategic attainable goals should clarify to the people involved with it the importance of its use and thus, minimize obstacles and misuses of Target Costing. The focus is not in the process itself, but what may be achieved with a well-structured target costing process. Therefore, Target Costing may be a very important aspect of a business strategic management, fostering competitive advantage based on innovation and time-to-market, as well as setting the basis for effective industry positioning.

Target costing demands a series of cost data and information that are key in guiding managerial efforts to attain strategic goals, i.e., product and services innovation. Entrepreneurs may profit from this managerial accounting artifact since it reveals cost structures inherent in a business projects and search for creative ways to start business operations. Likewise, to managers, it should discipline their strategic efforts in staying ahead of competitors, though the biggest challenge is to keep this vision over time.

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