
Japanese Target Costing: A Historical Perspective

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INTRODUCTION

Target costing originated in Japan in the 1960s, though it remained a secret for years. Since the 1980s, however, when target costing was widely recognized as a major factor for the superior competitive position of Japanese companies, extensive efforts have been made to convey target costing to Western companies. Many large companies in North America and Europe have tried to adopt target costing to enhance their cost management and, thus, increase their competitiveness. Consequently, many variations of target costing have been developed and are being used in different countries.

Since target costing, like many other management practices and philosophies, is environment-specific, it is not surprising to see these variations in practice. Even though many published articles have greatly contributed to the wider use of target costing, most of the articles have dealt with only one specific aspect of target costing, and some have caused misconceptions about Japanese target costing. These misconceptions may result from the limited exposure of some of the authors to the holistic approach of target costing in Japan.

THE ORIGIN OF TARGET COSTING

A retrograde approach for determining product costs, which is one of the most important features of target costing, can be found as early as the beginning of the last century at Ford in the United States and in the development of the Volkswagen Beetle in Germany in the 1930s. At Volkswagen, in order to meet the price goal of DM 990, alternative technical solutions were weighed on the basis of cost considerations (Rösler, 1996). Yet a full-fledged target costing approach began during the period of scarce resources after World War II. During this time, Americans created a concept of maximizing desirable product attributes while at the same time minimizing product costs (Leahy, 1998). The technique became known as “value engineering” and was subsequently adopted by Japanese companies in order to withstand stiff competition within Japan. In the 1960s, value engineering was combined with the idea of influencing and reducing product costs as early as possible during the planning and development stages of a product (Buggert & Wielpütz, 1995).

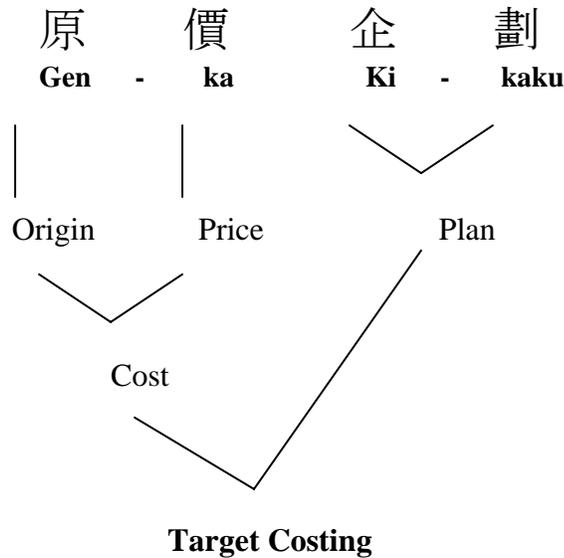
The first use of value engineering in Japan—known as “genka kikaku”—occurred at Toyota in 1963, though it wasn’t mentioned in Japanese literature until 1978 (Tani et al., 1996). Later “genka kikaku” was translated into “target costing,” the term now used throughout the world. Rösler (1996) did etymological research to clarify the derivation of the term “target costing” from Japanese language, which is described in Figure 1. Even though Kato (1993) criticizes the use of “target costing” as a translation of “genka kikaku,” the term has been generally accepted in the Western world. At the annual meeting of the Japan Cost Society in 1995, the official name was made “target cost management” on the grounds that “target costing” was too vague and did not convey the true meaning of “genka kikaku.”

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Figure 1. The Origin of Target Costing



Source: Rösler, F. (1996), Target Costing für die Automobilindustrie, Wiesbaden 1996. (English translation has been added by the authors.)

THE DEFINITIONS OF TARGET COSTING

Apparently many Japanese scholars do not themselves agree on the exact meaning of “genka kikaku.” There are a number of different concepts and definitions (Bhimani, 1995). As Hiromoto (1988) states, “They don’t simply design products to make better use of technologies and work flows; they design and build products that will meet the price required for market success—whether or not that price is supported by current manufacturing practices. Their management accounting systems incorporate this commitment.” Similarly, Sakurai (1989) writes that “...target costing can be defined as a cost management tool for reducing the overall cost of a product over its entire life cycle with the help of production, engineering, R&D, marketing and accounting departments.”

Later, “genka kikaku” was viewed as a tool of profit management. As Monden (1995), for example, states: “Target costing is defined as a companywide profit management activity during the new product development stage that includes: (1) planning products that have customer-pleasing quality, (2) determining target costs (including target investment costs) for the new product to yield the target profit required over the medium to long term given the current market conditions, and (3) devising ways to make the product design achieve target costs while also satisfying customer needs for quality and prompt delivery.”

A detailed discussion of the various definitions by Japanese scholars can be found in the work of Seidenschwarz (1993), which classifies the definitions into three different categories:

- Market-oriented (Hiromoto).
- Engineering-oriented (Sakurai and Monden).
- Product function-oriented (Tanaka and Yoshikawa).

As the variety of definitions indicates, “genka kikaku” was not developed whole from an established theory but piecemeal and in practice from competitive pressure in Ja-

pan (which will be described in detail in the next section). This is also evidence of the broadness of the concept. For example, target costing has been tied closely to total quality management (TQM) efforts and factory automation programs in many companies (Sakurai, 1989). The broadness of target costing extends beyond technical aspects, thus raising significant behavioral implications. For example, Kato et al. (1995) consider target costing an integrating mechanism that ties the various functional units in a company together into one coherent system. Implementing target costing effectively removes internal barriers of communication among the employees. Hiromoto (1989) emphasizes the motivating effect of target costing and the resulting innovative energy. He believes that the goal of management accounting is to motivate employees and provide instruments that enable employees to think and act in the right way.

THE DEVELOPMENT OF TARGET COSTING

Even though the basic concept of target costing has been in existence in Japan for more than 40 years, its application has evolved rather slowly as many companies responded to changes in the external environment. As competition grew fiercer and profits weakened, the use of target costing intensified and companies developed better methodologies. This section describes how the original “genka kikaku” developed into full-fledged target costing.

Until the early 1990s, many companies in Japan were using target costing effectively, though their applications of it were limited to relatively few products and parts. Target costing was also largely dependent on experience and intuition rather than on scientific and objective information. In other cases, target costing was initiated by purchasing departments as a tool to manage suppliers, so it never extended into other areas of the company. It was also common to implement only some components of target costing rather than a fully integrated system. However, as different autonomous activities were being integrated into target costing, the approach slowly evolved into a far more powerful system (Buggert and Wielpütz, 1995).

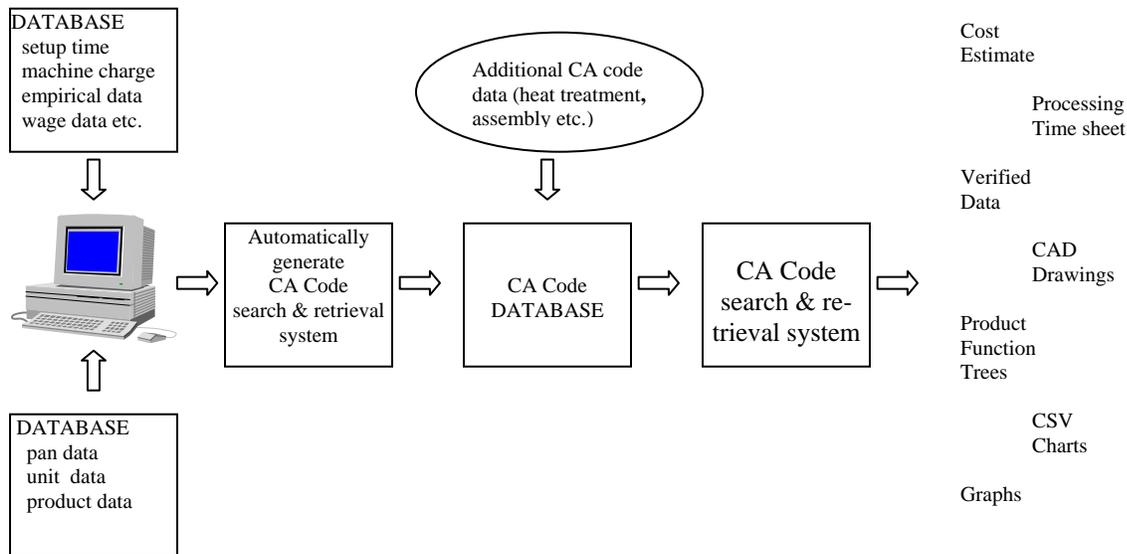
In the early of 1990s, three major events occurred in Japan that contributed to significant changes in target costing. The first and most significant event was the bursting of the economic bubble in 1990 and 1991, which caused many companies to struggle to meet customers’ expectations of lower prices. Existing target costing practices made it difficult to eliminate extra cost. At the same time, in an effort to survive, the strategic focus of major Japanese companies shifted from increasing market share to earning profit. More integrated, companywide efforts to reduce costs resulted, with efforts focused mainly on expanding the existing target costing systems.

The second event was the rise of the Japanese yen against the U.S. dollar, which started in 1993. By 1995, the Japanese yen had appreciated as much as 50 percent against the dollar. It moved from a stabilized exchange rate of 130–140 yen per dollar in 1992 up to a record 84 yen per dollar. As a result, both exports and the profit margins of Japanese companies plummeted. To survive, Japanese companies intensified their use of target costing.

The long recession in Japan caused by a crisis in the financial sector was the third major event that forced many Japanese companies to squeeze out costs to meet their profitability requirements. This time the improvement focused largely on information processing and information technology support. Since companies have been upgrading their target costing systems since 1990, the amount of data needed to estimate costs more accurately has increased significantly. Manual databases, such as cost tables, can no longer handle all the data required. As companies extend target costing, cost table are becoming too complicated to handle the enormous amount of data required when they are updated and take into account new functions, new materials, and new designs. Therefore, computerized, scientific data processing and simulation systems, such as cost analysis (CA) codes, are becoming increasingly popular in Japan.

CA codes were originally developed in Japan in the late 1960s by Hitachi; they were further enhanced at Komatsu into cost tables. These have now become computerized databases that enable a company to retrieve information about parts, units, and products by name, function, shape, size, weight, assembly method, and types of raw materials. CA codes are also used as the basis for time and cost studies and for “kaizen” (which is commonly translated as “continuous improvement”), because they make it possible to search a database by assembly method, size, functions, processes, or similar criteria (Niebuhr, 1998). A CA code construction flow chart developed in Japan by AlphaBrain Corporation is presented in Figure 2.

Figure 2. Cost Analysis Code Construction Flow Chart



Source: The AlphaBrain Corporation Manual, 1998

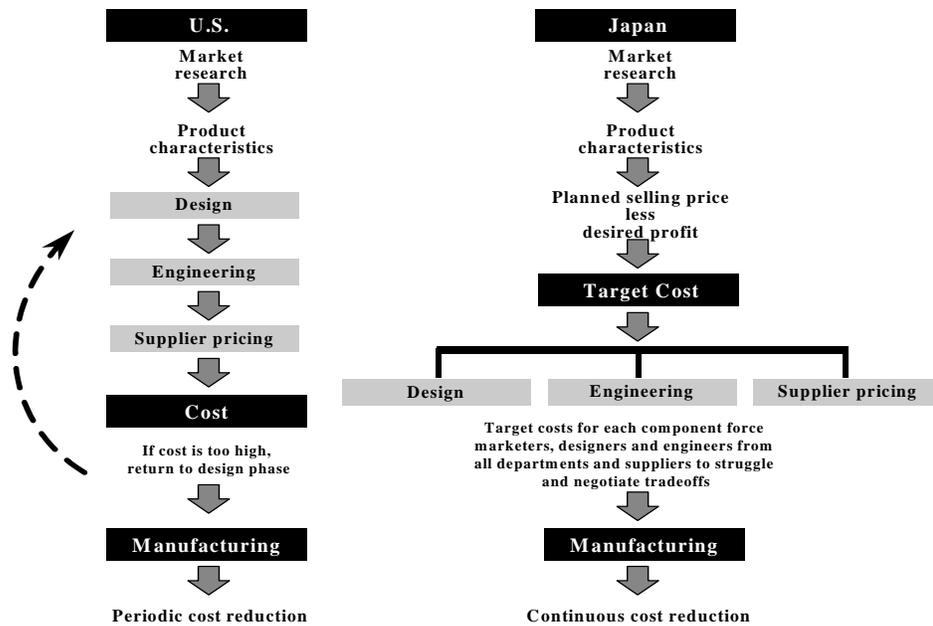
Clearly, target costing has evolved from a relatively simple instrument for controlling the cost of purchases to a comprehensive profit management instrument (Hasegawa, 1994). Its goal is now generally understood to be to minimize life-cycle costs so that long-term profit is maximized. To achieve this objective, target costing takes into account not only production costs, but also the costs incurred in the entire product life cycle. The objective of minimizing life-cycle costs is also achieved throughout the value chain by developing a collaborative relationship with all members of the extended enterprise, such as suppliers, customers, and distributors. Open communication is an important element in maintaining long-term and mutually beneficial relationships with the members.

THE PROCESS OF TARGET COSTING

The uniqueness of Japanese target costing comes into play when strategic product positioning is completed in coordination with the company’s general strategy. This is also the point in time when the product-market mix has been determined and information about what product attributes and what related prices consumers desire are collected

through a market analysis. Up to that point, the Japanese way is similar to the traditional Western cost management. However, there are important differences between these two approaches in the way the market information is gathered and converted into an actual product. A more detailed comparison is presented in Figure 3.

Figure 3. Western and Japanese Cost Management



Source: Worthy, F. (1991), Japan's smart secret weapon, *Fortune* 124, 1991, 4, pp. 72-75.

The Japanese approach is highly beneficial, because it works to actively control costs before or during product development. Under the traditional approach, a company waited until much later in a product's life cycle, by which time a significant part of the costs had become fixed. Consequently, the company had little ability to change or control costs.

Target costing begins with the question: "What should a product's cost be?" In theory, this question can be answered by the following well-known equation:

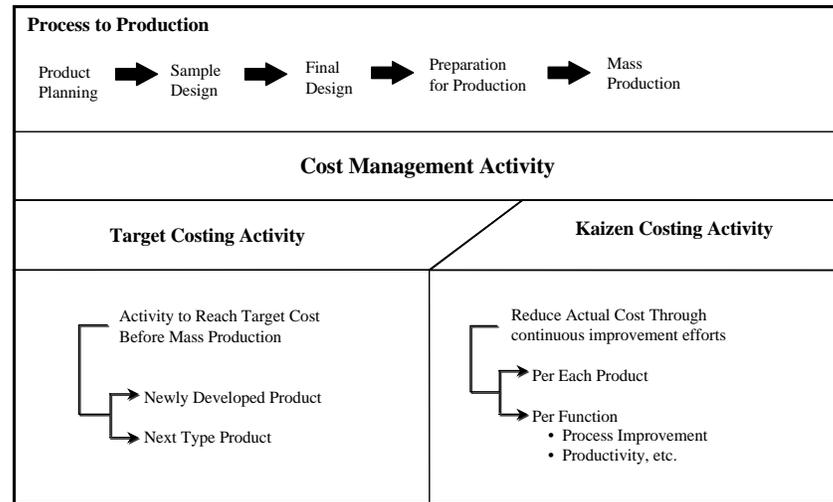
$$\text{Sales Price} - \text{Target Profit} = \text{Target Cost}$$

In practice, different approaches for establishing target costs can be found in the publications of Japanese authors. Sakurai (1989) classifies these approaches into three general categories: top-down, bottom-up, and combined. Under the top-down method, a target cost is derived from sales and target profits. No input on the target cost comes from lower management. The bottom-up method accepts the cost estimated by engineers based on their current skills or experience and the availability of production facilities. Under the combined method, top management sets the target profits, but engineers are consulted in the process of determining the target costs.

When it becomes obvious that a desired price is unattainable in the short run, target costs are often established in terms of a compromise. Such a compromise encompasses allowable costs, called "drifting" costs, that are dictated by the market and standard costs

that are forecasted on the basis of existing processes and technologies. The process is illustrated in Figure 4.

Figure 4. Target Costing and Kaizen



Sources: Monden, Y. and Lee, J. (1993), How a Japanese Auto Maker reduces Costs, *Management Accounting*, 75, 1993, 2, pp. 22-26; Horváth, P. and Lamla, J. (1996), *Kaizen Costing*, *Kostenrechnungspraxis*, 40, pp. 335-340.

The target costs obtained for the entire product are subsequently split into smaller units. Tanaka (1993) cites two basic methods for the splitting of costs: the *functional areas* method and the *components* method. The functional areas method allocates target costs to product functions according to customers' expectations. This method is recommended when the new product development process is complex and extensive. The components method allocates target costs to various groups of product components. It is suitable for products having a relatively small degree of innovation and material- and technology-oriented developments. Once responsibilities for the respective target costs on the component and functional levels are assigned, the process of new product development is considered finished (Hiromoto, 1989).

The most important aspect of target costing is market its orientation. The realization of customer expectations with respect to both price and functionality is secured by means of a retrograde procedure for the establishment of cost targets and then splitting the aggregate product target costs by explicitly taking functional requirements into consideration (Hiromoto, 1988). Customer input, therefore, is central to target costing. Customer input is needed throughout the product development cycle to set prices and profit targets, to guide design decisions, and to make function and feature trade-offs (Ansari and Bell, 1997).

“Genka kaizen” is another integrated part of the Japanese cost management system, which is directly linked to target costing systems. “Genka kaizen” (commonly called “kaizen”) focuses on decreasing costs in the production phase, whereas “genka kikaku” is

designed to help reach product cost goal determined by the market. Horváth and Lamla (1996) describe the connection between both concepts as follows:

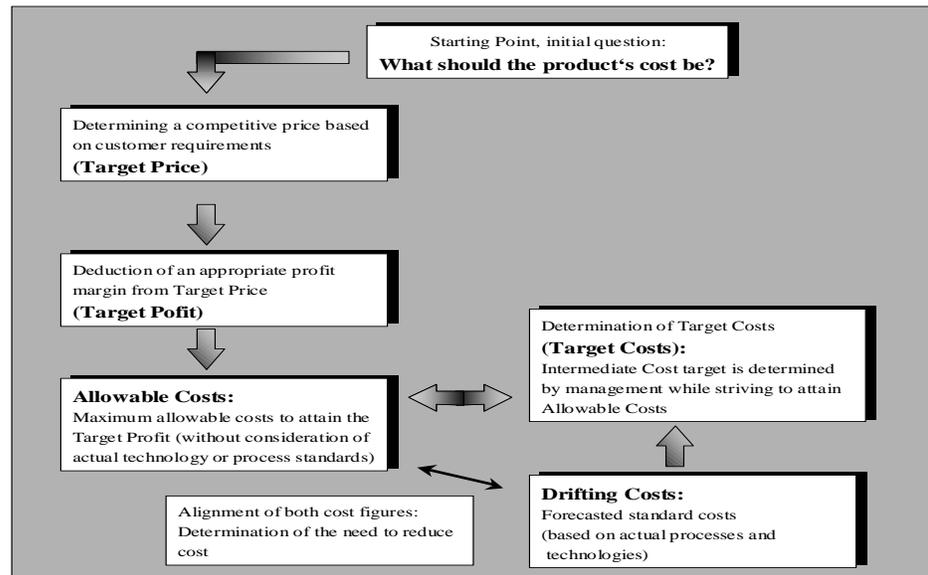
Kaizen costing means the complete utilization of cost reduction potentials. This utilization is realized by matching, little by little, innovative leaps that are initiated by target costing with continuous improvement.

However (as shown in Figure 5), these two concepts cannot be viewed separately. They need to be seen as the basic elements of Japanese cost management. Monden and Hamada (1991) write that target costing and kaizen costing should be inseparable. Both approaches serve the overall goal of orienting a company toward the demands of the market. Yet they differ regarding the application in the various process components of product development and the respective periods of operation. Kaizen is an instrument for realizing a short-term profit goal, whereas target costing is focused on realizing long-term profits. The most important similarity is probably their focus on feed-forward control as opposed to the Western feedback control (Hasegawa, 1997).

THE UNDERLYING PHILOSOPHY OF TARGET COSTING

In concept, target costing might appear easy to understand and implement. However, the straightforwardness of target costing should not lead to an assumption that implementing target costing process will inevitably lead to the desired results. The key to the success of target costing is the adoption of its underlying philosophy throughout a company. According to Kato (1993), target costing is a combination of many techniques, all reinforced by the target costing philosophy. In Western literature, this aspect is often disregarded because of the predominant focus on the processes and techniques of target costing. Yet the following Toyota example shows the importance of management philosophy.

Figure 5. Procedure of Determining Target Costs



Source: Buggert, W. and Wielpütz, A. (1995), *Target Costing - Grundlagen und Umsetzung des Zielkostenmanagements*, München, Wien, p. 44. (English translation has been added by the authors.)

For years Toyota in the United States has been offering seminars open to the public, including competitors. In these seminars, the Toyota Production System (TPS) is introduced in detail. Toyota's approach is three-fold: techniques, systems and philosophy. Even though Toyota's techniques and systems are explained in great detail and can be copied by competitors, none of them have been able to reach the same degree of efficiency as Toyota (Taylor, 1997). As Taylor states, "Adopting TPS means acquiring a different mind set." To explain the full context of target costing philosophy is far beyond the scope of the paper, but the following paragraphs review Japanese business and cultural factors that help Japanese companies develop and implement target costing successfully.

Top Management Leadership

Hasegawa (1994) believes that the ability to align all employees with the mindset of the company's leadership is an important factor for the implementation of successful "genka kikaku" or "genka kaizen." Considering the cross-functional nature of target costing, it is not surprising to see that a top-down approach is a must for the successful implementation of target costing. In many companies in Japan, top management is strongly behind the initiative of target costing. Ansari and Bell (1997) also state that the championship of top management creates the necessary awareness for target costing and enables a target costing team to acquire the resources needed to accomplish the goals.

Team-Orientation

Another crucial success factor for target costing is the team-orientation of employees. This team-orientation is part of the Japanese way of life (Albach, 1990). Confucianism, which advocates harmony among members, plays a major role. Another important aspect is the sense of security that individuals have in a group. In Japan the group always comes before the individual (Alston, 1986). In the eyes of the Japanese, a task's complexity cannot be resolved through an individual's decision. This is also manifested in Japanese communication and decision-making processes. Decisions are made in a group setting. Even though the group leader is the one who ultimately decides, a group's members are expected to accept the decision as their own (Martin et al., 1992).

Commitment to Work

The attitude of Japanese employees toward their work and company is one of the most remarkable phenomena in understanding Japanese business. The sense of duty the Japanese feel toward their employer is indicated by a survey that showed that about 80% of Japanese workers believe that their work comes before family (Streib and Ellers, 1994). This sense of duty is visible in the readiness of Japanese employees to work long hours and their willingness to have short vacations (Martin et al., 1992).

Mutual Trust

Management in Japan is centered on human beings, as Hasegawa has shown in his study. The main focus is the building of mutual trust between managers and employees as well as suppliers. This mutual trust is supported by explicitly employing factors such as autonomy, participation, cooperation, and elasticity (Hasegawa, 1997). The best example of a trust-building measure is the lifetime employment that is common in Japan (Alston, 1986). Without well-established mutual trust, employees would not demonstrate life-long loyalty to their company, and top management would not guarantee life-long employment to the employees.

Management Accounting

The behavioral viewpoint can also be found in the structure of Japanese management accounting. Japanese management accounting is designed not so much to produce precise

information for strategic decisions as to make employees act in accordance with the company's strategy and to make them think strategically. This goal is pursued by extensive use of nonfinancial measures and a strict market orientation. Further, Japanese companies make sure that financial information provided by "controlling departments" is communicated quickly and completely among employees, and that employees understand how their own unit's performance is reflected in the company's financial results (Hiromoto, 1989).

Japanese controllers are well-versed in both the practices of cost management and the needs of their internal customers (Alston, 1986). Japanese cost accounting also differs significantly from Western cost management. Cost reduction has been a major issue and consequently, product costing (e.g., to get more accurate product costs using activity-based costing) plays a less important role in cost accounting. All of these factors are consistent with the target costing philosophy.

Education

The Japanese zeal for education is well-known. Companies in Japan are also constantly striving to develop their employees through job rotations and extensive training. Integral thinking and understanding of other units within a company is made possible by emphasizing a comprehensive education (Alston, 1986). Target costing is characterized by an all-embracing viewpoint that reflects the Japanese process orientation. Learning in Japan is based on "learning-by-doing." This leads to continuous change and the realization of the impact one's actions have on one's environment (Buggert and Wielpütz, 1995).

Keiretsu

The Japanese economy is characterized by the existence of a strategic network called a "keiretsu." A keiretsu is created among legally separate companies but based on close financial ties or common traditions; there is strong cooperation among the companies (Cooper and Slagmulder, 1997). This cooperation integrates suppliers into the product development process, which is an essential element of target costing.

Information Network

Japanese companies have an excellent information network with customers and suppliers, which makes it possible for them to apply a "hands-at-the-market" research method. Seidenschwarz (1993) defines this term as "a market research method that is characterized by an intensive backflow of information to the product developers on the customer perceptions regarding products currently in the market." This shows that Japanese companies are furnished with information by not only formal market research, but also through intensive cooperation with suppliers and buyers.

A CONCLUDING REMARK

This article provides an overview of the development of target costing in Japan and discusses the underlying philosophy of target costing through a literature survey (published mainly by academicians and practitioners in Germany, Japan, and the United States). A better understanding of target costing as it has developed in Japan will help companies outside Japan successfully adapt target costing for their own business environments.

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