

Research on Corporate Strategic Cost Management Based on Value Chain Analysis

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Abstract: Strategic cost management, as the continuation and breakthrough of the traditional cost management, is the inevitable trend of the development of cost management. At present, the corporate competitive advantages come not only from enterprises' core capabilities, but also from the competition of the entire value chain associated with enterprise interests. Value chain analysis is one of the core analysis tools of the strategic cost management. This paper firstly reviews the related research literatures of the strategic cost management, then discusses the characteristics of the strategic cost management, and dissects the analysis approach of the strategic cost management from the perspective of value chain analysis, finally, proposes the specific countermeasures for the implementation of corporate strategic cost management.

Keywords: Strategic Cost Management; Value Chain; Cost of Supply Chain

I. Introduction

The strategic cost management is an approach which is designed to reduce costs while improving the position of strategic objective, and it is based on strategic management, oriented by market with the main purports of strategic value chain analysis and the synthetical application of various traditional and modern cost management methods and techniques. It extends the scope of the cost management to the boundaries of organizations, transferring from production process to the entire product life cycle, including the entire cost chain management: product development and design, production and marketing, distribution and after-sale service. Analyzing enterprises and their affiliates' cost behaviors and cost structure from a strategic perspective, the strategic cost management, unlike the traditional cost management which restricts the cost in a micro level, shifts the focus to overall corporate macro strategy. The strategic cost management is concerned about the costs of every link of corporate value chain, and it serves the needs of corporate strategic management by effectively reducing various related costs. The implementation of the strategic cost management is an inexorable requirement for the modern enterprise cost management.

II. Review of the Literature on Strategic Cost Management

As early as 1980s, the strategic cost management was proposed by British scholar Kenneth Simmonds who considered that, from corporate competitive position in market, the strategic cost management is "to provide managers with information for the strategic decision-making based on the analyses of the relevant cost data of enterprise itself and its competitors. [1]" Later, Professor Michael Porter of Harvard Business School put forward the strategic cost analysis based on value chain in his works of *Competitive Advantage* and *Competitive Strategy*[2]. Then, the American management accounting scholar Jack Shank et al accepted the view made by Kenneth Simmonds, and published the work of *Strategic Cost Management* in 1993 based on the study of Michael Porter. This book described the most widely used strategic cost management model nowadays in detail and crystallized the theoretical methods of strategic cost management[3]. Tony Grundy (1996) proposed a management model, which is characterized by the application of strategic cost management tools into problem diagnosis and the proposal of options for strategic positioning and then the program evaluation performance and implementation; its essence is to make the strategic cost management a tool for the development of competitive strategy to enhance the corporate competitiveness[4]. Tomkins and Carr's (1996) model of strategic investment provides an important linkage between strategy formulation, value chain analysis, and cost driver analysis. In Tomkins and Carr's model, cost driver analysis is the catalyst for cost management and cost management takes one of two forms: cost reduction efforts and efforts to re-engineer the value chain to produce a different cost structure [5]. The British Professor Robin Gooperand (1998) proposed the strategic cost management which centers on the activity costs system [6]. Generally speaking, the foreign scholars' studies on strategic cost management began in the late of 1980s and rapidly developed in 1990s. These studies started from how the system cost management strategy services the burgeoning corporate management, and their findings are mainly presented by broadening cost management perspectives and methods to provide the cost information useful to strategic decision-making and help enterprises to establish competitive strategy and take the cost management system which matches corporate competitive strategy, so that enterprises can stand on a vantage point in the fierce market competition.

III. Typical Characteristics of Strategic Cost Management

Strategic cost management has broken through the corporate boundaries and extended the cost perspective to the outside of enterprises. It believes that the costs are largely affected by the upstream and downstream enterprises, and emphasizes on reducing costs and enhancing competitive advantages by seeking the cost cooperation between upstream and downstream enterprises. What the strategic cost management focuses on is the cost of the whole product life cycle, including the costs of R&D, production, sales and customer's use costs, product obsolescence costs and waste disposal costs.

In addition, strategic cost management promotes the costs management to a strategic level, and holds that the strategic cost management a strategic management methods working with the means of costs and the costs management runs throughout the entire strategic management process. Strategic cost management is characterized by the followings:

(1) With the competitive features, the strategic cost management attaches great importance to the establishment of competitive advantages

The strategic cost management, carrying out cost management with the consideration of competitive advantages, is designed to not only reducing costs, but more importantly to helping policy makers of enterprises to determine the cost management strategies and establish and maintain the long-term competitive advantages. The strategic cost management pitches the costs reduction on the establishment of corporate competitive advantages by reforming the drawbacks of simply reducing cost in the traditional cost management.

(2) Focusing on strategic thinking, strategic cost management is characterized by long term

As a support system of strategic management, the strategic cost management carries out its activities based on the formation and increase of the competitive advantages. Unlike traditional short-term tactical management methods which ignore the future development of enterprises, the strategic cost management services the achievement of corporate long-term strategic management objectives, reflecting the strategic thinking and realizing the improvement and development of the concept of cost management.

(3) Focusing on the relationship between enterprises and their external environment, strategic cost management is characterized by externality

The traditional cost management mainly provides simple cost information on the base of situation management of the internal management of enterprises, and casts about for cost reduction in corporate internal activities. Instead, the

strategic cost management is a comprehensive cost management rising above corporate boundaries and it is no longer limited to the internal production process, and the cost management reaches the vertical and horizontal value chain outside enterprises, expanding the spatial and temporal scales of cost management. From time, it extends to the entire product life cycle; from space, it extends to suppliers and sellers or consumers.

(4) Focusing on the changes in internal and external environment, strategic cost management is characterized by flexibility

As a management system, the strategic cost management is adjusted according to different situations rather than static. With the combination of strategic cost management and specific competitive strategies, different strategy options demand various strategic cost analysis view and cost management methods, and the focuses of strategic cost management are different. Under the cost-leading strategy, the cost management focuses on the relationship between enterprises and suppliers as well as sellers and exploiting potentialities to reduce costs and achieve the lowest costs; under the differentiation strategy, cost management focuses on the stage of product design, paying more attention to product function analyses and customers' individual requirements. Furthermore, the association with many management methods such as modern enterprises' flexible manufacturing system, object cost management planning etc. also reflects the strategic cost management' pursuit of flexibility. It features flexible management and realizes the effectiveness of management by using the measures as technology, organization, etc.

IV. Analysis Approach of Corporate Strategic Cost Management from the perspective of Value Chain

American scholar Michael Porter put forward the concept of value chain, which has been adopted by the strategic cost management and become an important analysis tool of the strategic cost management, in his book *Competitive Advantage in 1985*. Porter held that enterprises are the collection of a range of activities and he introduced the value chain to represent these strategy-related activities. It is by better carrying out these important strategic activities in lower costs than their competitors that enterprises can win competitive advantages.

In order to obtain competitive advantages, enterprises must analyze the costs of the activities of value chain to identify the differences between themselves and their competitors. Value chain analysis focuses on the integration of the associated activities of the operators from raw materials suppliers to the consumers of final products, analyzing how to control costs from the strategic point of view. The value chain analysis is divided into the corporate internal and

external value chain analysis by different analyses perspectives.

1. Strategic cost management based on corporate internal value chain analysis

The corporate internal value chain consist of different corporate internal activities, generally including R&D, product design, production, marketing strategy, sales and after-sales service and other activities which create product value. Each activity, with the mutual interdependence and restraint, not only consumes resources but creates value. Modern cost management research has focused extensively on the "production" portion of the value chain. The cost management literature developed in parallel with advances in modern manufacturing, including technological advances (e.g., flexible manufacturing systems) as well as advances in the organization and management of operations (e.g., quality management, inventory management). As in the case of product development and design, many of the latter advances accompanied the emergence of lean manufacturing in Japanese firms [7]. Advanced manufacturing technologies increased the speed of production and lowered the cost of changing between dissimilar products; thereby lowering the marginal cost of producing a mix of heterogenous products and allowing firms to compete on economics of scope rather than on economics of scale. Cavinato (1992) studied the costs proceeded from overall supply chain by using activity-based costing (ABC) and reduced overall activity costs through the integration of logistics processes[8]. Activity -based costing (ABC) sought to better match costs of resources to the activities that consume them, and in so doing, to provide visibility for the new structure of costs that accompany high-technology investments and new modes of organizing. The premise of ABC is that costs are not strictly variable or fixed with respect to unit volume, but vary in a hierarchical fashion (e.g., batch-related costs, product sustaining costs) with activities. Accounting research has focused on the cost of products that emerge from new product development work, Ulrich and Eppinger (1995) urge managers to separate production costs from costs of new product development activities so that important tradeoffs that must be managed to achieve sustainable profits for the life of a product become visible. They motivate their arguments by pointing out that the cost of product development can easily exceed the cost of production over the lifecycle of the product, that delayed development activities may both increase the cost of development and decrease the price that the product commands, and that if products are pushed to market to meet deadlines before they meet quality requirements, the savings in development costs can easily be swamped by high costs of remediation (e.g., rework and warranty costs) and price erosion[9]. Rebitzer, G. (2002) assessed the supply chain costs by the introduction of the concept of life cycle costing (LCC), the main advantage of such method is that the costs driving factors and the paradox factors independent of supply chain can be identified with the least efforts. The non-value-added

business processes and the business links with low cost-effectiveness within enterprises can be eliminated and transformed and the high-cost business processes can be optimized and reengineered [10]. The key of corporate internal value chain analysis is to identify what are the real value-added activities within enterprises which have produce competitive advantages, and then to manage them more effectively.

2. Strategic cost management based on corporate external value chain analysis

Firm can not enjoy long-term sustainable profits unless all critical stakeholders enjoy adequate returns (financial or otherwise) while participating in the value chain as compared to their alternative opportunities. Thus strategic cost management demands that the firm spend as little as possible to achieve the desired results, but spend as much as needed to keep all key stakeholders at the table. Many opportunities for optimizing the cost structure of the enterprise lie at the boundaries of the firm. Strategic cost management must extend beyond the firm's current chart of accounts --- encompassing costs borne by all critical stakeholders and extending to more distant future periods [11]. According to researches, Seuring (2001) found that most cost management methods only ruminate on the corporate internal costs which are divided into direct and indirect costs, but not on the transaction costs from the member enterprises of supply chain such as suppliers, customers, etc. They also hold all the costs of supply chains only consist of the direct costs (including primarily raw materials, labor and machinery costs), operating costs (the costs from the management activities in manufacturing and products distribution to customers) and transaction costs (including the costs from the activities treating the information and communication with all suppliers and customers) [12]. Kulmala (2002) thought about the problem of the inter-enterprise costs and management in the supply chain era from the perspective of the economics of transaction costs [13].

Enterprises should break through the value chain analysis of their own and expose themselves in the industry value chain. The product technology development, product design features, the frequency and timeliness of the material supply, raw materials, packaging, etc of upstream enterprises will affect business costs. Therefore, the industry value chain analysis will enable enterprises to pay more attention to the value chain of their upstream and downstream enterprises to identify their position in the industry value chain and the relationship with upstream and downstream enterprises and their comparative advantages with their competitors involved in the same value activities, and then determine the outsourcing, alliances and other strategies based on the analysis of the costs and benefits of upstream and downstream enterprises. The improvement of the vertical linkages of value chain will facilitate enterprises and their upstream and downstream and channel enterprises to jointly

reduce costs and improve the overall advantages of these related enterprises.

(1) Analysis of supplier value chain

With the advent of lean manufacturing, firms began to see the wisdom of collaborating with key suppliers as a means of enhancing new product development, controlling what for many firms was a very large share of total costs, and increasing the quality and reliability of production. Moreover, as cost accounting systems began to support analysis of different cost objects, it became clear that the "price" paid to suppliers was often only a portion of the total cost of doing business with a particular firm. Williamson (1985) argued that in typical settings that accompany negotiations between firms (i.e. information asymmetry, various transaction uncertainties (technological, market, performance measurement), firms may retain activities within the firm to avoid opportunistic behavior at a later date by self-interested transaction partners. Thus, transactions costs are another cost to be minimized in the determination of firm boundaries [14]. Dekker (2003) studies a retailer that uses activity-based costing to assign "costs of ownership" to its suppliers, thereby explicitly assigning costs associated with poor supplier performance as an additional cost that is added to the price of goods procured from the supplier [15]. Slagmulder, R. (2004) proposed the concept of inter-organizational cost management (IOCM), and he believed that the inter-organizational cost management, as a structural approach to research value chain cost management, requires the close cooperation between buyers and suppliers to reduce the cost of the entire supply network [16]. Through the supplier value chain analysis and in virtue of good relationship with suppliers, enterprises can reduce costs and achieve cost-leading strategy or help enterprises to improve product quality and achieve the product-differentiation strategy. By understanding suppliers' production process, enterprises can assist suppliers to change raw material design to more match with the demands of enterprises to save the costs from some initial processing of raw material for enterprises. Enterprises can also save procurement costs and reduce the risk of raw material supply through the establishment of alliances with suppliers or the direct implementation of forward integration.

(2) Analysis of customer value chain

Management accounting research is virtually silent on managing costs in the portion of the value chain connecting the firm to the end customer. Johnson and Kaplan (1987) pointed out that manufacturing costs may be important, but they are only a portion of the total costs of producing a product and delivering it to a customer. Many costs are incurred "below the line" (the gross margin line), particularly marketing, distribution, and service expenses [17]. Cooper, R, Slagmulder (1997) considered that cost management includes all the measures which exert prior influence (control) on cost structures and cost behaviors, including the estimation, planning, control and evaluation of

the costs of value chain, and he also proposed that cost management focuses not only on the purchase price, but also on the costs related to low quality, low reliability and low delivery capacity [18]. It is important to note that research on customer-specific costs has strong synergies with research in marketing that uses new sources of customer-level data to predict customer revenue streams. Advances in information technology (e.g., bar coding, internet sales) and statistical analysis (e.g., data mining) enable companies to know their customers better and to use customer relationship management (CRM) to customize the marketing and sales investments [19]. Marrying customer-level costs and revenues with assumptions about repurchase frequency and customer loyalty allows marketing researchers to quantify lifetime customer profitability and manage marketing and sales campaigns to affect the equation. Through the analysis of customer value chain, enterprises can emphasize on improving and strengthening the relationships with customers, increasing customer value and satisfying customers' demands. The favorable relationship with customers will benefit both enterprises and customers. For example, the sales and service costs can be reduced by understanding the way and cycle consumers using products; for the products with complex use methods and operation procedures, enterprises can save the maintenance costs caused by users' improper operation by providing door-to-door guidance or other services.

(3) Analysis of competitor value chain

Enterprises can understand the advantages and disadvantages relative to their competitors and analyze the causes via the analyses of the value chains of themselves and their competitors, and thus enterprises can establish their targeted competitive advantages. For example, they can take the enterprises with the best performance in the same industry as the benchmarks and assess their value chains and identify the part of the value chain where the cost difference with their competitors lies, and then combine the analyses results and determine the best strategy to eliminate the cost disadvantage to create cost advantages.

To sum up, the purpose of the corporate internal value chain analyses is to identify the most basic value chain and divide it into individual value activities and then compare the costs and effectiveness of each activity; the external value chain analysis determines the corporate status in the overall market environment from the vertical point of view. By coordinating or optimizing the relationships with upstream suppliers and downstream distributors or customers, enterprises can reach strategic alliance and create overall competitive advantages through integration. Enterprises can only better achieve strategic cost management if they fully understand various links of the value chain and, on the base of the internal value chain, seek the ways to reduce costs and improve cost efficiency in the horizontal and vertical value chains.

V. Countermeasures for the implementation of specific of strategic cost management

(1) Optimize corporate internal value chain activities and reengineer business process

Business process refers to a range of carefully designed activities to provide specific customers or markets with specific products or services. In corporate value chain, a business process is a group of continuous customer-centered activities from the beginning to the end. The content and scope of cost management should not be restricted to the production field; instead, we should reduce costs from the design stage and even from the development planning stage. The cost management of modern enterprises should contain every link which has the impact on cost changes, and it should permeate through the areas of enterprises forecasting, decision-making, technology, marketing and so on. Business process reengineering is to serialize the business processes and make the process functions more flexible to realize better cost efficiency by analyzing and reengineering the original business processes in the value chain.

(2) Establish strategic alliances and reconstruct inter-enterprise value chain

The traditional cost management ignores the analysis of external environment changes and fails to study the strategic partnership with related upstream and downstream enterprises to seek the ways to reduce costs from the standpoint of external value chain, while the strategic alliance is the cooperative relationship with the vertical upstream and downstream enterprises and horizontal competitors, sharing some links in the value chain to reduce costs and enhance competitive advantages. We can reconstruct inter-enterprise value chain by establishing strategic alliances. Every enterprise has the core specialty of its own in different links of its separate value chains: some activities are advantages of enterprise and some are its weak links. Enterprise can seek competitive advantages by optimizing and coordinating internal activities or establishing strategic alliances with other enterprises.

(3) Implement outsourcing strategy in value chain activities

Outsourcing is that enterprises focus only on the core and main functions or business via outsourcing some secondary or supporting functions or business to some outside professional service agencies by integrating some relatively excellent external corporate resources and using the specialty and strengths of such resources to improve the overall efficiency and competitiveness. All links of value chain have mutual interaction and influence, and the operation quality of each of them will directly influence other links and then the entire value chain seriously. If an enterprise has its core competitive advantages in the value chain and there are certain activities which will not separate enterprise and its customer, so such activities should be outsourced to the enterprise with corresponding core

competitive advantages, which will enable enterprises to create more value.

VI. Summary

The scope of the strategic cost management breaks through enterprise boundaries rather than be limited in the corporate internal production process. Firstly, because cost management gradually focuses on preproduction costs in product design and materials purchase, and postproduction costs in product marketing and customer use cost control, the strategic cost management penetrates into the sections of R&D, supply, production, marketing and after-sale service to comprehensively and meticulously analyze and control the costs within and across various sections. Secondly, the scope of the strategic cost management breaks through enterprise boundaries rather than be limited in the corporate internal production process, and the strategic cost management can control costs by coordinating the upstream (supplier) and downstream (distributors) enterprises associated with its value chain. Finally, the strategic cost management analyzes the costs of corporate external competitor and identifies the costs gap in comparison with competitor and reconstructs corporate cost advantages and competitive advantages.

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