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A New Activity-Based Financial Cost Management Method

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Abstract

The standard activity-based financial cost management model is a new model of financial cost management, which is on the basis of the standard cost system and the activity-based cost and integrates the advantages of the two. It is a new model of financial cost management with more accurate and more adequate cost information by taking the R&D expenses as the accounting starting point and after-sale service expenses as the terminal point and covering the whole producing and operating process and the whole activities chain and value chain aiming at serving the internal management and decision.

Keywords: Activity-based costing; activity-based financial cost management, standard activity-based costin

1. Introduction

With the entry to WTO, Chinese enterprises are facing both domestic and international competitions, which result in more intense market challenges. In order to gain advantages and favorable positions in the market, the enterprises are in great need of more advanced management and the enhancement of their own competitive abilities. In this dissertation, the integrated application system of costing management is thoroughly studied. Both cost systems-the standard cost system and activity-based cost system stemmed from the actual development and practical need of manufacturing enterprises. Standard cost system is mainly devoted to the basic elements in the manufacturing process, such as direct material, direct labor and overhead, with its focus on control over the variables. While activity-based cost system concentrates on the identification of activity and cost drive, laying heavy emphasis on the analysis of activity and value-chain. Both cost systems have advantages and disadvantages of themselves and could be complementary to each other if combined.

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2. THE FOUNDATION AND FRAMEWORK OF THE STANDARD ACTIVITY-BASED FINANCIAL COST MANAGEMENT MODEL

The standard activity-based financial cost management model takes the whole activity chain, value chain as the foundation stone, focuses on reflecting as the R&D, purchasing, manufacturing, marketing and after-sale service, etc. The system of the standard cost and activity-based cost coexist, compatible among them.

The standard activity-based financial cost management model practically and fully reflect the rationality and superiority of the standard cost system and of the activity-based cost. The scientific management and effectively control of standard cost system together with the extension financial cost management and expanding financial cost management intension of activity-based cost have been fully used in the standard activity-based financial cost management model. All the direct cost of material and labor that can be allocated directly to the cost of corresponding goods in the whole activity chain and value chain are calculated and managed according to the thought of standardization control of the standard cost system as much as possible.

Make the advanced and feasible standard from the price and quantity in order to take strong control beforehand, in the process control the cost and find out the reason in real time according to the difference situation, correct the deviation, reduce, improve the cost according to the analysis of the difference afterwards, and finally offer the reliable basis for revision of the standard cost. To those expenses, which cannot be directly allocated to the cost of corresponding goods, different treatments are given regard to the amount and proportion size. Aggregate those expenses that in smaller amount and lower proportion, and allocate to the cost of relative goods according to the standard that in the greatest relevance.

Recognize the activities that consume these resources, take the activities as the intermediary and allocate these expenses to the cost of corresponding goods, fully use the advantage of calculating the cost accurately of the activity-based cost, and in a permitted situation standardize the activities cost.

3. SPECIFIC CONTENT OF THE STANDARD ACTIVITY-BASED FINANCIAL COST MANAGEMENT MODEL

3.1 R&D section

R&D expenditure is those expenditures that can be directly attributed to the research and development activity or can be allocated to these activities according to a reasonable and consistent basis. Of all these “expenditures”, material, labor, service, depreciation and other expenses that can be directly allocated to the specific project are the direct costs of every R&D project. Expenditures that can't be allocated to the specific project directly (the indirect cost of R&D), mainly calculate the activities cost. Recognize the activities and activities cost pool, such as test measuring, quality testing, rank evaluation, machine debugging, putting in order, maintenance of equipment, transportation, staff training, comprehensive management, etc., charge the incurred indirect cost to each activity cost, then identify each cost driven, and at the period end according to the cost driven transfer the activities cost to the cost of each project. The R&D cost of the failure project will be borne by the succeeding project or relevant projects. If the failure project does not have a succeeding one, neither have relevant ones, then we can think it relates with all the projects and its cost will be shared by all other projects.

The R&D expenses will be allocated to the products finally. Considering the characteristic of product life cycle, we can choose to amortize them on the corresponding products with higher speed for a fixed period of time (such as 5 years or other more suitable time); accelerated amortization is similar to the accelerated depreciation of the fixed assets.

3.2 Purchasing section

Purchasing activities are those activities that enterprises purchase the input elements in the value chain, including raw materials, machinery and equipment, instrument, office equipment and buildings, etc. Taking raw materials as an example here, Resources consumed of the purchasing material includes the price, transportation expense, loading expenses, insurance premium, packing expense, storage fee, reasonable loss in the transportation way, selection and arrangement fees before put in storage, tax and other expenses required to be charged in the cost. Among them except the purchase price, insurance premium and tax, other expenses are generally the common expenses of many varieties and classifications of raw materials. We can choose the single allocation standard when the amount and the proportion of the common expense is small as to the purchase price, and when the amount and the proportion of the common expense are relatively great as to purchase price, and also when these expenses have different driven, take the activities as intermediary to allocate these common expenses, purchasing section can be divided into several activities, for instance, transportation, carrying, classify and putting in order, storage. The calculation of the expenditures of the purchasing section is mainly the calculation of the cost of activities.

As to the cost pool of transportation activity, we can determine the cost driven of the activity according to the expenses standard of the transportation sector. The Carrying activity can take the labor (artificial hour) and other power (machine hour, train number, etc.) inputted as the driven of the activity. The labor (artificial hour) inputted can be the driven of the classifying and putting in order activity, and the volume that the material takes up can be the driven of the storing activity, so we can adopt the same way to determine the driven of other activities.

3.3 Manufacturing section

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Taking the manufacturing industry as an example here, Manufacturing activities are those activities that turn the raw materials into the final products, such as machining, assembles, the maintenance of equipment, testing, production arranging and so on. The method that can better control and manage the resource consuming in the manufacturing section is to implement standard activity cost system. We will not focus on the same part of the manufacturing section designed in the standard activity-based financial cost management model and in the standard cost system but on the different part.

Total amount of the manufacturing overhead

$$= \sum \text{ Total cost of the activities}$$

$$= \sum \text{ Total activities cost that the product consumed} \quad (1)$$

Total cost of the activities

$$= \sum \text{ (Quantity of the resources consumed} \times \text{Unit price of the resources)} \quad (2)$$

Total amount of activities cost that product consumed

$$= \sum \text{ (Quantity of activities consumed} \times \text{Unit activity fee)} \quad (3)$$

$$Unitactivi\,tvFee = \frac{Total\ Cost\ Of\ \ Activity}{Sum\ Of\ \ Quantity\ Of\ \ The\ Activity} \quad (4)$$

The standard management of the manufacturing overhead can only standardize to the level of the activity, and cannot to the level of the unit product. Therefore, while making relevant decision, we should consider the quantity factor of relevant products at the same time, thus we can really know the unit cost of relevant products and making the corresponding decision.

The actual cost will be got when the manufacturing overhead implement the activity-based cost, and it is relatively more accurate, but still difficult to control beforehand; If we carry on standardized management to the activity cost, and standardize the cost to the activity, i.e. the standard cost of each activity has been made in advance, so the standard financial cost management and the activity-based management blend together, form the so-called standard activity-based cost. For instance, the standard manufacturing and preparing cost (Yuan / time), the standard testing cost (Yuan /time, or Yuan / labor hour), the standard maintenance cost (Yuan / time, or Yuan / machine hour), the standard power cost (Yuan / machine hour), etc., these standard activities cost can get the standard total amount of the manufacturing overhead when being accumulated.

Standard activity cost

$$= \sum \quad \text{(Standard quantity of resource each activity consumed} \times \text{Standard unit resource price)} \quad (5)$$

After determining the standard cost of the activity, the standard total amount of the manufacturing overhead has been determined too.

Standard total amount of manufacturing overhead

$$= \sum \quad \text{(Standard activity cost} \times \text{Sum of quantity of the activity)} \quad (6)$$

Total cost of the product

=Total amount of standard cost of direct material ＋Total amount of standard cost of direct labor ＋ Total amount of standard manufacturing overhead (7)

Unit cost of product

=Standard cost of direct material ＋Standard cost of direct labor＋

$$\frac{Total\ \ Amount\ Of\ \ S\tan dard\ Manufacturing\ Overhead}{\Pr oduction\ Quantity\ of\ \ The\ product} \quad (8)$$

Price difference of standard activity

$$= \sum \quad \{\ \text{Actual quantity of resource consumed} \times (\text{Actual price of resource} - \text{Standard price of resource}) \quad (9)$$

Quantity difference of standard activity

$$= \sum \quad \{\ (\text{Actual consuming quantity of resource} - \text{Standard consuming quantity of resource}) \times \text{Standard price of resource}\ \} \quad (10)$$

3.4 Marketing section

Marketing section includes all kind of activities incurred during the process after production is completed from transporting to the warehouse, storing in the warehouse to transporting to the customer's finally and the selling process. Resources consumed during marketing section are generally reflected as storage fee, transportation expense, sales staff salary and welfare funds, fees for contacting the customer and signing a contract etc. It is suitable to use activity-based costing. When the condition is ripe, determine the standard cost of each activity and implement the standard activity financial cost management.

The activities of marketing section can be classified as storage, transportation, contact customer, sign order, etc. The area that the products take up can be the cost driven of the storage activity; and the traffic per kilometer can be the cost driven transportation activity (i.e. expense of per traffic per kilometer); we can choose the contacting number of times or contacting time as the cost driven of contacting customer's activity and choose the post number of times or the quantity of order as the cost driven of signing the order activity.

3.5 After-sale service section

After-sale service section includes all activities what the enterprises carried on around of customer after the sale is made. Such as dealing with the complain products repairs, replace return and maintenance, and setting up customer database, strengthen the contact with customer, surveying customer satisfaction, and information feedback, etc. Resources consumed of after-sale service are as: staff salary and welfare funds, travel charge, the raw materials in the time limit of three guarantees replace and return losses, fees for dealing with complain, expense for customer's file establishment and administration, investigation fee of products use and of customer satisfaction etc. we can also adopt activity-based costing. After the condition is ripe, implement the standard activity financial cost management.

The activities of the after-sale service section can be classified into dealing with complain, products maintenance, products replace and return, installation and testing, customers' management, customers training, investigation and feedback etc. The number of times to deal with complain can be the cost driven of dealing with complain activity, and the maintenance number of times can be the cost driven of the maintenance activity; the quantity of products replaced or returned can be the cost driven of to products replace and return activity; and the installation and testing number of times can be the cost driven of installation and testing activity; while we can choose customer quantity, training times, and investigation times or numbers as the cost driven of customer management activity, customers training activity, and investigation and feedback activity respectively.

4. LEVEL AND ALTERNATIVE OF THE STANDARD ACTIVITY-BASED FINANCIAL COST MANAGEMENT MODEL

If we divide the whole activity chain into three parts, can be divided into before production, in production, and after production. Activity-based management or standard activity-based financial cost management can be used according to the situations of the enterprise before production and after production; while in production we have three conditions including standard financial cost management, standard cost + activity-based management, standard cost + standard activity-based financial cost management. When combine the three parts of before production, in production, and after production, we'll get 12 results to be chosen. These 12 results have four levels, i.e., level of the standard cost, level of

standard cost + activity-based cost, level of standard cost + activity-based cost + standard activity-based cost, and level of standard cost + standard activity-based cost.

4.4 Level of standard cost

In a situation that the original financial cost management of enterprises lags behind very much and the production cost take absolute proportion; implement the standard cost to manage the production process. With the improvement of the various conditions of enterprises and the enhancement of managerial ability, financial cost management is then expanded and extended.

4.2 Level of standard cost + activity-based cost

This level has three detailed levels. First, using activity-based cost to manage the manufacturing overhead in those enterprise whose manufacturing overhead is in large amount and high proportion and has the requirement for high accurate cost information, i.e., using standard cost to manage direct material and labor and using activity-based cost to manage the manufacturing overhead. Second, by the expansion of the above-mentioned detailed levels, activity-based cost is used not merely to manage the manufacturing overhead but also to manage the resources consuming before production and after production under the possible condition. Third, the level of standard cost is expanded. While implement standard financial cost management in production, use the activity-based costing for the consuming resources of every section of before production and after production under the possible condition.

4.3 Level of Standard cost + activity-based cost + standard activity-based cost

This level is the partly deepen of the last level and is the result of taking standard activity-based financial cost management in a situation that the condition of some contents using activity-based financial cost management in last level is ripe. It also has three detailed levels. First, to those enterprises that adopts activity-based cost for the manufacturing overhead who has the ripe conditions, implement the standard activity-based financial cost management; namely standard financial cost management of direct cost + activity-based management of part manufacturing overhead + standard activity-based financial cost management of part manufacturing overhead. Second, the above-mentioned detailed levels are expanded, the standard activity-based financial cost management is used not merely for part of the manufacturing overhead, but also for those activities already using the activity-based costing in the sections before production and after production which have ripe conditions; Namely standard financial cost management of direct cost + activity-based management of some manufacturing overhead and other sections + standard activity-based financial cost management of some manufacturing overhead and other sections. Third, it again deepens the expansion of standard cost level in last level. While implement standard activity-based financial cost management in manufacturing section, to the consuming resources before production and after production, partly use activity-based costing, and partly use the standard activity-based financial cost management.

4.4 Standard cost + standard activity-based cost level

This level is the supreme level of the standard activity-based financial cost management model, which is the ideal level using the standard financial cost management for direct material and direct labor during the manufacturing process, and adopting activity-based management for the other resource consuming, then standardizing the activities cost and becoming the standard activity-based cost. This level is the

standardization control and management for the resources consuming of each section and each activity during the manufacturing and operating process, which have really realized the whole course and omni-directional scientific management of the cost.

Because the model itself has level nature, enterprises have alternatives in the financial cost management. Enterprises can choose the corresponding level financial cost management suitable for oneself according to one's own state, management expectancy, fierce degree of competition, and improve constantly on this basis, until adopting the supreme level of financial cost management of the model, and reaching the ideal state. The alternative of the model is not merely a choice of the level, and also can be a certain lines, a certain nodal choice in the level. For example, for the current situation that enterprise's existing management level is lower and technological strength is relatively weak, standard cost cannot be used in the whole system, we can choose only one point in the standard cost level and only make the standard consuming quantity for those material that takes the greatest proportion in the cost, thus catch the most key ring to control, and in a situation that the conditions such as the primary work, etc. are ripe afterwards, expand the range controlled progressively.

5. CONCLUSION

The main purpose of this paper is to establish a set of scientifically designed financial cost management model, which could both tally with the actual situation and keep pace with future development in China. According to the existing levels of production of Chinese enterprises --most enterprises are at produce stage of mechanized production or the semi-automation, and consulting the experience and current situation of financial cost management of other countries that numerous enterprises are using the standard cost system in the world now and absorbing the innovated idea and the marrow of activity-based management.

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