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Analysis of Enterprise Development from the Perspective of the Cost

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ABSTRACT

The continuous expansion of output value of production enterprises makes the competition between industries more and more fierce. In order to further improve economic benefits and achieve stable and healthy development of enterprises, cost management becomes the focus of enterprise management. Although cost management contains many methods such as activity-based costing, target costing, etc., life cycle costing and variable cost method are two cost management methods commonly used by enterprises. Through the review of the enterprise cost management discipline and relevant literature, this paper mainly explores four aspects: the role of cost management in enterprises; theory explanations of life cycle costing and variable cost method; the application of these two methods in specific enterprises; the deficiencies and relevant suggestions in the application of these two methods. The paper finds that although life cycle cost method and variable cost method have some defects, they have achieved good results in the cost management of enterprises, helping enterprises to improve economic benefits and achieve future development.

Keywords: *Cost management, Life cycle costing, Variable cost method, The development of enterprises*

1. INTRODUCTION

With the rapid development of the world economy and science and technology, many scientific and technological production factors begin to be integrated into the production of products, which makes the competition among enterprises more intense. As an indicator of management and measurement, cost is playing an increasingly important role in the development of enterprises. Thus, how to manage it is the problem that the enterprise needs to focus on and that's why cost management has gradually become an important tool of enterprise management. Cost management refers to the management activities that enterprise managers continuously reduce and control costs on the premise of meeting customer requirements. It requires continuous attention, development and implementation based on the integration of promising methods into current management practices. When an enterprise decides to implement cost management in its daily operations, there are some useful methods to choose from activity-based costing, variable cost method, life cycle costing, target costing, etc. Each of these methods has its own advantages and disadvantages in the application process. Besides, rare papers analysed enterprise development from all these methods. Therefore, this paper will start from the role of cost management in enterprises, focusing on the two most commonly used cost management methods- life cycle costing and variable cost method. The purpose is to give full play to the value of cost management and help enterprises develop faster and better in the information age of rapid development of science and technology.

2. THE ROLE OF COST MANAGEMENT IN ENTERPRISES

2.1 Improving the economic benefits of enterprises

Cost management is an important part of enterprise management. When enterprises are faced with a variety of production options, they need to fully consider the purchase cost of different production materials, the production cost of the processing process, as well as the transportation and storage cost of the sales process, etc. The level of these costs is the key factor for enterprises to occupy the market initiative, which is related to the cost management of enterprises. Therefore, effective cost management can not only strengthen the cost control of enterprises to further reduce costs, but also help enterprises to determine the best output and the most competitive advantage of the price, so as to increase the economic effect of enterprises.

2.2 Determining the future development direction of the enterprise

In the current economic environment, there are many factors that affect the future development of enterprises. External factors include market situation and national policies, while internal factors include enterprise capital, development strategy and technology, all of which are closely related to enterprise costs. Therefore, enterprise cost management is conducive to promote their own stable and healthy development, and when the external conditions change rapidly, enterprises can also be strong economic strength and scientific management strategy to more actively face the problems and challenges that may appear in the future.

3. COST MANAGEMENT IN THE APPLICATION OF ENTERPRISES

3.1 Life Cycle Costing

3.1.1 Theory explanation

Life cycle costing (LCC), originating from enterprise life cycle theory, is a theoretical thinking and practical method of examining enterprise cost management from a holistic and dynamic perspective. In a narrow sense, the cost management method includes the following three stages.

Research and development stage: in the research and development of new products, enterprises should fully carry out market research to understand the needs of customers, and combine the existing technical capabilities and financial background of the enterprise to carry out research and development. The cost of this stage includes market research, product design, production preparation, etc. Compared with other stages, the cost is very high, and usually only has capital input without output. Therefore, enterprises should carry out comprehensive quantitative analysis at this stage to calculate the investment and cost level of different schemes after operation, and select the scheme with the largest economic benefit through comparison and analysis.

Production stage: After the successful development of new products, enterprises often carry out small-scale production first in order to verify whether they have large-scale production potential. The cost of this stage is mainly publicity and promotion costs, raw materials and labor costs consumed in the process of small-scale production of products, etc. Enterprises should focus on the benefits of advertising, the timeliness of suppliers, and their own production efficiency. With the further expansion of the production scale of enterprises, the fixed costs are gradually diluted, the cost of unit products decreases, and products begin to make profits and form economies of scale effect. This stage has been unable to reduce costs, so enterprises should focus on cost management to further improve production efficiency.

Sales stage: this stage contains two contents, one is the marketing cost of selling products directly or indirectly to customers; the other is the after-sales service cost of maintaining customer relationship and brand image. In this stage, the enterprise should manage and control the cost from the three aspects of product storage, transportation and user usage. In addition, the enterprise should distinguish the economic responsibility of each functional department and bear the profit and loss according to the economic responsibility.

3.1.2 Application

Analog Devices, Inc.(ADI) is widely recognized as a global leader in data conversion and signal processing technology. It often provides financial institutions such as banks with software that analyzes loan loss reserves and loan portfolios, including ADI-1 software for small institutions and ADI-2 software for large institutions. The costs associated with the two software sales situations are shown in the table below.

Table 1. costs associated with ADI-1 and ADI-2

	ADI-1	ADI-2
Sales Revenue	4500000	2500000
Sales Cost	1240000	1005000
R&D Expense	1550000	600000
Sales and service expenses	1450000	400000

Before adopting the cost of life method, ADI has been using accounting analysis method to analyze its profitability. The enterprise first calculates the total gross profit of the two products to be $4,755,000, and deducts the total R&D cost and sales and service cost, and finally obtains the total profit of $755,000. But obviously, this level of cost analysis is not in-depth enough, because most of ADI costs, such as R&D and marketing expenses, are not included in the product cost comparison, which is not conducive to finding cost drivers. In order to better understand the product cost structure and reduce the cost, the enterprise introduces the life cycle costing method to carry out the cost management. The specific calculation is as follows:

Table 2. Calculation by using life cycle costing

	ADI-1	ADI-2
Sales Revenue	4500000	2500000
Sales Cost	1240000	1005000
Gross Profit	3260000	1495000
R&D Expense	1550000	600000
Sales and service expenses	1450000	400000
Profit	260000	495000

This analysis method is used to apportion R&D expenses and sales costs to ADI-1 and ADI-2. It can be seen that most of the costs are incurred by ADI-1, and the profitability of ADI-1 is weaker than ADI-2. Management can use these results to trace the causes of ADI-1 overcost to identify cost savings opportunities.

3.1.3 Disadvantages and Suggestions

At present, there are two problems in the use of life cycle cost method: first, the data collection of life cycle cost is not smooth. This method is closely related to the product life cycle, which involves a wide range of costs. When the enterprise cost collection system is not perfect, it is difficult to apply this method into enterprises; Second, the whole life cycle cost control incentive and constraint mechanism is not perfect. Due to the complexity of job division and business process in enterprises, cost control will involve post separation, cost accounting, execution control and budget control. If the lack of institutionalized management and execution, it will seriously affect the effect of cost management.

In view of the above two points, enterprises should constantly establish a scientific whole life cycle cost accounting system and resource integration mechanism. This can be achieved through big data technology. Furthermore, enterprises should also clarify the rights and responsibilities of enterprises to control the whole life cycle cost and follow the principles of combination of macro and micro, long-term and short-term cost management. Only in this way can the utility of enterprise cost management be improved and the enterprise business process be continuously optimized.

3.2 Variable cost method

3.2.1 Theory explanation

Variable cost method is an application of incremental analysis in cost management. It is a useful tool in enterprise short-term cost management. The key to this method lies in the cost analysis, which means to distinguish the variable costs and fixed costs of an enterprise. Compared with the traditional total cost method, which regards all production costs as product costs, variable cost method has two theoretical bases: one is that the product cost is only the variable manufacturing cost. In management accounting, product costs are the costs that occur in the production process, the cost of a product should include only direct material, direct labor, and other variable manufacturing costs incurred in the cost of production that vary in direct proportion to changes in volume. Second, fixed manufacturing costs should be taken as period costs. Fixed manufacturing cost is mainly to provide and maintain the design of production capacity of the cost, and production capacity utilization degree has nothing to do with the actual production of the product.

Furthermore, when using this method to calculate, the marginal contribution index is often used. Its specific calculation formula is: Marginal contribution = total sales revenue - total cost of sales. This index can help enterprises make operational decisions and measure the cost management effect of enterprises

3.2.2 Application

Lenovo Group, founded in 1984, is an innovative international technology company, specializing in the production of desktop computers, laptops, mobile phones and so on. The production and sales volume, price and cost information of enterprise MODEL A notebook in 2014 and 2015 are shown in the following table:

Table 3. Detailed Sales Information for MODEL A notebook in 2014 and 2015

	Estimated sales volume	Actual sales volume	Actual Sales Price	Variable production cost per unit	Variable selling expenses per unit	Fixed Production Cost	Fixed Selling Cost
2014	500000	450000	3000	1200	600	30000000	100000000
2015	450000	500000	3000	1200	600	30000000	100000000

If the enterprise adopts the full cost method to calculate the cost, the profit calculation formula of the enterprise in 2014 is as follows: Profit =450000×3000-450000×(1200+600+30000000/500000) -100000000 = 413million, and the profit calculation formula of the enterprise in 2015 is as follows: Profit =500000×3000-450000×(1200+600+ 30000000/450000) -50000 ×(1200+600+ 30000000/500000) -100000000 = 467million. This method of calculation is obviously unreasonable, because the profit and sales of an enterprise are completely separated under the total cost method. That means the more products an enterprise sells, the lower its profit will be. When the enterprise changes to the variable cost method for profit calculation, the profit calculation formula of 2014 is as follows: Profit =450000×3000-450000×(1200+600)-130000000, and the calculated profit is 410 million. Similarly, the profit calculation formula of 2015 is as follows: Profit =500000×3000-500000×(1200+600)-130000000, the calculated profit is 470million. In this cost management mode, the ending inventory cost is included in the next accounting cycle, so the pre-tax profit calculated in 2014 and 2015 can truly reflect the positive correlation between the actual sales and pre-tax profit. That is, the more sales, the higher pre-tax profit. there is no separation between the two, which is conducive to the cost management of enterprises.

3.2.3 Disadvantages and Suggestions

Although variable cost method can help managers make accurate decisions according to pre-tax profit, variable cost method also has inevitable disadvantages: Firstly, it cannot adapt to the needs of long-term decision-making. The key of variable cost method is to distinguish variable cost and fixed cost, which is established in the short term of enterprise production and operation. The production, operation and cost items of enterprises are affected by many factors and cannot remain unchanged for a long time. That is, its effects may diminish over time. Once the relevant scope is broken through, the variable cost rule cannot be applied to decision-making needs. Secondly, cost decomposition is a difficult thing. The accounting division of costs into fixed and variable costs is largely based on assumptions and uses certain decomposition methods, which may not be very accurate.

In view of the above two points, enterprises should fully consider the mixed cost problems occurred in the production process of the company, and adopt a more accurate and flexible method of dividing costs. In the process of decomposition of mixed costs, scientific mathematical model calculation methods, such as regression linear method, can be used, but sometimes there will be difficult for accurately quantitative analysis of the problem. In this case, accounting personnel need to use the information they have mastered and previous experience to analyze, and then clearly divide them.

4. CONCLUSION

With gradually fierce competition between enterprises, increasing economic efficiency and decision cost management in the enterprise play an important role in future development direction. This paper focuses on the method of life cycle cost and variable cost method and expounds them in four aspects: the basic theory of these two kinds of cost analysis method; the concrete application of the two methods in the enterprise; the problems existing and corresponding solutions. The paper finds that although life cycle cost method and variable cost method have some defects, they have achieved good results in the cost management of enterprises, helping enterprises to improve economic benefits and achieve future development.

In general, the enterprise cost management is a dynamic process, in the face of the change of the external market environment, enterprises should introduce advanced technology in the field of cost management and theory timely, strengthen the cost management informationization level, improve enterprise cost management personnel's comprehensive quality. This aims to meet the new market demand and achieve sustainable development of enterprises. Nevertheless, lack of the latest technologies to further research is one of the limitations in this paper. It is hoped that the variable cost method and life-cycle cost method can be applied to a wider range of fields in the future and be combined with the latest technologies such as big data to further promote the development of enterprises.

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