

The Application of Activity-Based Costing in the Construction of the First-Class Major

ZHANG Rong¹ LI Jian-li^{2*}

¹*School of Accounting and Finance, Xi'an Peihua University, zhangrong@peihua.edu.cn;*

²*School of Foreign Studies, Northwest University, zhangrong@peihua.edu.cn*

ABSTRACT

The advantages of Activity-Based Costing (ABC) include promoting the basic budget of activities and improving the management of activities, process and activity chain (value chain). The construction of the first-class major and first-class university in China's institutions of higher learning is the expansion of the activities of improving quality and increasing efficiency in the non-enterprise sector. Previous studies show that when applied to the universities, the ABC method is conducive to controlling the educational cost. Starting from the construction of first-class major, by setting up first-class teaching centre, the first-class scientific research center and the first-class practice environment, the application of the ABC method can be executed, through which the non-value-added part can be eliminated in the construction of the first-class major in order to improve the management of the value chain in the construction of the first-class major and first-class university.

Keywords: *Activity-Based Costing, first-class major, resource, cost driver*

1. INTRODUCTION

According to "Guideline to the Application of Management Accounting issued by the Ministry of Finance", the advantages of Activity-Based Costing refers to the ability to promote basic budget of activity and the management of activity, process and activity chain[1]. At present in Shaanxi province, universities such as Xi'an Jiaotong University and Northwest Polytechnical University have been selected as the first-class universities at the national level and many majors in different universities have been listed as national first-class majors. However, in the construction of the first-class major, many universities are confronted with various and serious financial problems. Therefore, it is a topic that needs urgent attention and detailed discussion.

2. Literature Review

Activity-Based Costing was put forward by the American accounting master Eric Kohler in his *Dictionary of Accountants* 1952, and its comprehensive application did not come into being until the publication of *How the Cost Accounting Systematically Twisted the Product Cost*, co-compiled by two Harvard University Professors namely Robert Kaplan and Robin Cooper. Its major principle is to take activity costing as the media between resources and products in order to achieve a more scientific and rational allocation of the indirect costs. Its initial aim lie in a more accurate calculation of the cost of the manufacture enterprise in order to convert the attention of the managers from the statistical result of the products to the reasons leading to the formation of the cost. With the deepening research of its

application, this method has been closely connected with the whole value chains such as the product design, product analysis and the product decision, and its application scope has been gradually spread to such fields as logistics, trade and finance.

After the introduction of ABC into China, Professor Yu Xuying and a group of scholars have applied the theory to banking, rail transportation extensively, but its application to the institutions of higher education was only seen in recent years. In the report entitled "A Case Study of the Application of ABC Method in the Railway Transportation Enterprise in China", the method is highly applicable to various industries and various types of organizations, and the sound market system and complete company management structure have created effective conditions and forward drives for the ABC method[2]. Wen Subin (2016) insists that based on activity and taking the flow of resources as the clue, the ABC method makes a calculation and allocation of the cost and an analysis of the drive of the costing. The ABC cost calculation process is consistent with the actual consumption process. It not only increases the accuracy of the cost calculation of an enterprise, but also highlights its value-added part of the cost calculation and decreases the waste in order to help the enterprise to control the cost effectively. Accurate cost analysis can help the management authorities to formulate more effective cost ing strategies in order to increase the operation efficiency of the enterprise and increase its competitiveness[3].

Dong Yunzhi (2018) holds the view that according to calculation thought of resource-activity-cost object, the whole cost model in the institutions of higher education should contain five factors such as cost calculation object, cost calculation period, resource, activity and cost driver,

among which resource, activity and cost driver constitute the key factors. Determining the resource means to clarify the scope of cost calculation, dividing the activity means to clarify the cost responsibility and choosing the cost driver means to clarify the information according to which cost is divided[4].

From the above-mentioned, it is easy to conclude that the application of ABC to the institutions of higher learning can lead to the clarification of responsibility, power and benefit and the effective control of expenditure and cost in order to promote the competitiveness of the organization, which is in high accordance with the initiation of the method.

3.THE STATUS QUO OF THE EDUCATIONAL EXPENDITURES OF THE INSTITUTIONS OF HIGHER EDUCATION

Some scholars think that service can be divided into two categories: The first includes finance, hotel industry and business while the second contains non-marketable services including education, medical care and government service. The analysis shows that the labor productivity of the marketable service industry keeps on increasing but that of the non-marketable service stays at a low level, where lies the hope of China’s economic development. The key to surpass the trap of middle-level income is to achieve the transfer of economic structure from the industrial sector to the service sector, and the key of whose success lies in the increase of its labor productivity, especially that of the those non-competitive and unopened service fields.

Both the development of the new field and the increase of the labor productivity of the service industry call for a large number of highly qualified technical personnel. Therefore, it is of great urgency and importance to speed up the construction of the first-class application-oriented colleges and majors.

According to “Report of the National Execution of the Educational Expenditure” in 2018, the general public educational outlay per student reaches 22, 245.81yuan. The general public expenditure for the institutions of higher education amounts to 20973.62 per student, an increase of 3.3 percent over that of 2017 in which the amount was 20298.63 yuan.

Table 1 Increase Rate of the General Public Educational Budget per Student

Unit: RMB yuan

Regions	Institutions of Higher Learning		
	2017	2018	Increase Rate (%)
Nation	21471.03	22245.81	3.61
Beijing	66596.76	63273.24	-4.99
Shaanxi province	17244.34	16742.08	-2.91

Source: National Statistics Bureau

Up till August 2018, out of every one hundred thousand people in China, there are 2658 college students in China, with 5268 college students in Beijing and 3562 college

students in Shaanxi province respectively. The total population of college students per one hundred thousand people in Beijing is 1.48 times that of Shaanxi province, but the general educational budget per student in Beijing is 66596.76 yuan, 3.86 times as much as that in Shaanxi province where the budget is 17244.34 yuan per student. Obviously, The universities in Shaanxi province is faced with a financial problem, so it is urgent to effective way to control the education cost without doing harm to the quality of education.

4. INTRODUCTION TO THE CONTENT OF THE FIRST-CLASS MAJOR IN ACCOUNTING

The goal of the construction of the first-class major includes the construction of the first-class educational management, teaching staff, scientific research personnel, teaching environment and conditions and creating a first-class major at the provincial level or even at the national level.

Therefore, the content of the construction includes 1. Cultivating a series of landmark achievements; building the first-class educational management, teaching staff and scientific team; promoting educational exchange programs and professional skills; publishing academic papers in key journals; providing complementary fund or bonus for research programs at /above the provincial level, and investment in textbook publication 2. Building the first-class research centers which calls for expenditures on books and materials, academic journals, professional data base, inviting scholars, hosting seminars and symposiums, and the relevant expenditure for transportation, food and hotels and material printing and so on. 3. Building the first-class environment and conditions which calls for the cooperation between university and the enterprises, all kinds of students’ activities, contests, outside university field practice, on which the expenditures amount to a large figure.

In this university, 87 courses have been included in the construction of the first-class major, and all the cost involved in these course are mainly salaries, bonuses, pensions and other benefits for the teachers and staff members.

5. THE DESIGN PLAN OF THE APPLICATION OF THE ABC METHOD IN THE CONSTRUCTION OF FIRST-CLASS MAJOR

Since Jan. 1, 2019, “Government Accounting System: Account Titles and Statements of the Administrative Institutions” has been executed which will be a great help to the implementation of the ABC method. The ABC method involves resources, activity, activity center and activity costing bank and activity costing driver.

5.1 Diving activities, setting up activity center and determining activity driver

5.1.1 Diving activities

Talent cultivation is the primary mission of a university, and it is also its main industry. The educational budget can be divided into direct activity and indirect activity, the former including the direct activities concerning talent cultivation such as teaching, coaching, scientific research and so on while the latter including indirect services provided for the direct activities.

5.1.2 Setting up the activity center

Setting up the activity center is very important for the application of the ABC method [5]. The first-class teaching center includes disciplinary construction, course construction, teaching and research, publications and programs of the teachers, students practice, academic exchanges, and various kinds of students activities and contests.

5.1.3 Determine the activity drivers

After setting up the practical activity center, the activity drivers can be determined after an analysis of the consumption mode of the resources of different activities of the first-class major with a combination of their operational feasibilities.

1.First-class teaching activity center: Teaching work is closely connected with the cultivation of talents, which mainly involves courses. The expenditures on courses and lectures mainly contain teachers' salaries and benefits, therefore, the amount of courses offered to the students are taken as the activity drivers of the teaching activity center while considering the total number of students contained in each class.

2.First-class scientific research activity center: Expenditures on scientific research mainly include those on paper publishing, program bidding, data base establishment and so on, and they are can be determined as activity drivers according to the ratio of the students.

3.First-class practice environmental activity center: Labs are practice and training environment for students and they should be regarded as activity drivers according to the ratio of the students.

5.2 Collect activity cost and allocate it to cost objects

First, allocate direct cost to cost objects. As mentioned above, the particular resources belonging to the cost objects related to the first-class major in accounting need not to be

divided through activity center, but should be directly included in the cost objects.

Second, allocate indirect cost to different activity centers. The indirect cost which calls for division, can allocate resource consumption to the center of every activity. Finally, allocate resources to cost objects according to different activity centers.

6. CONCLUSION

The application of Activity-Based Costing can eradicate useless activities, increase the entire value chain and directly reflect the input-output ratio of the investment in the construction of the first-class major, which is conducive to the decision-making on the part of the university management concerning the reallocation of the resources. Xi'an, as the most important city in Shaanxi province, boasts a very good higher education background and diversified educational modes. Through an effective application of the ABC method, it is possible to promote the high-quality development of the higher education in Xi'an so as to ensure its competitiveness.

REFERENCES

- [1] A Guide to the Application of Management Accounting. Ministry of Finance, 2017 (09).
- [2] Wang Mingli, Xu Xuanxuan. The Design of the Operation System of the Lab Center of the Business Schools in Private Universities: Based on Activity-Based Costing. [J]. Newsletter of Accounting, 2019, (26):102-105.
- [3] Wen Subin, Luning. Application of Tools of Management Accounting and Activity-Based Costing in the High-tech Enterprises. [J] Friend of Accounting, 2016, (10): 133-136
- [4] Dong Yunzhi. On the Application of Activity-Based Costing in the Cost Calculation of Institutions of Higher Education. [J]. The Chinese Certified Public Accountant, 2018, (11):90-94+2.
- [5] Lin Xuechen. Study of Design of the Application of the Activity-Based Costing in Cost Calculation in the International Business Schools in the Institutions of Higher Education, [D]. Dongbei University of Finance and Economics, 2018.