Application of Mathematics in Accounting

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Keywords: Mathematics; Accounting; Mathematical methods; Education

Abstract: Mathematics will be applied in every aspect of our social life. To explore how to deal with the relationship between the basic course of mathematics and the specialized course of accounting in Colleges and universities can improve the consciousness of the combination of mathematics and specialized courses. At the same time, students should also take the initiative to cultivate their interest in learning mathematics and accounting, choose appropriate mathematical methods, and strive to become comprehensive quality and meet the needs of the development of modern education.

1. Introduction

Accounting is an information system that studies financial activities and cost information. It is not only a part of social sciences, but also one of the most important management disciplines at present. Since the origin of accounting, the application and development of mathematics have been inseparable from the beginning to the end. Especially in today's big data explosion in the 21st century, accounting can not do without the support of big data. How to deal with these data better, the theory and method of mathematics is an indispensable magic weapon of accounting. We should not only use scientific mathematical methods to seamlessly link up theory with the essence of accounting, but also choose appropriate mathematical methods according to the actual situation to fully promote the rapid progress of accounting.

2. The Importance of Combining Mathematics with Accounting

2.1 Historical Origin of Accounting Mathematics and Mathematics

Accounting is closely related to mathematics at the beginning of its birth. For example, in the ancient Chinese version Shuowen Jiezi, accounting is annotated as “meeting, combining”, “calculating, meeting and calculating”. It can be seen that mathematics and accounting are of the same origin, and their understanding of things is reflected in quantity, the former reflects the law of quantity, and the latter represents the law of value.

2.2 The Importance of Combining Accounting Mathematics with Mathematics

Marx once said that “only when a science succeeds in using mathematics can it really reach the perfect level.” Similarly, if accounting wants to develop in a real sense, it must be inseparable from the process of combining with mathematics. Mathematics is not only the tool and theoretical basis of accounting course learning, but also the ability to think logically and solve practical problems. Only when it is better applied to solve practical problems in our life, can it be the most important embodiment of the combination of the two.

3. Application of Mathematics in Accounting

In mathematics learning, we should pay special attention to mathematical theory and logical thinking. These two characteristics are also applicable to accounting. For the general quantitative analysis in accounting, we should not only deal with the quantitative relationship between the various elements of accounting and their internal relations, but also define some concepts in accounting accurately with the knowledge of mathematical theory. Mathematics learning not only

  DOI: 10.25236/mfssr.2019.029

cultivates students'logic, but also lays a foundation for the conclusion of data analysis when applied to accounting.

3.1 Application of Mathematical Theory in Accounting

3.1.1 Cost

Cost calculation is a very important part of accounting. Accounting mainly takes cost as the core, and records in detail the means of production and labor that various enterprises need to spend in their production. These costs need to be calculated in money, which is expressed as material loss cost and machine depreciation cost. Employment, wages and expenses of labor force, etc. The business activities of an enterprise include not only production, but also the daily retail sales of salesmen. Therefore, the expenses incurred in the sales activities should also be included in the cost. There are different mathematical methods for calculating different costs, such as labor costs and inherent asset loss costs. Although each method is different at present, they basically embody the central idea of accounting.

3.1.2 Square

When trying to balance the amount of borrowers'occurrence, we can use square as well as absolute value to compare. For example, we can square the difference between the amount of debit and the amount of credit, so we can get a positive result, and then compare it, so we can reduce the amount of calculation. If the result of a square is always less than any small positive number, then the equilibrium is affirmative. If the difference between the amount of debit and the amount of credit is very small, set to 1 penny, and the square of 0.01 is 0.0001, and if the square of (debit-credit amount) is less than 0.00001, it must be less than 0.0001, then there is no difference between the two sides, that is, balance.

We will find that the meaning represented by letters in every calculation formula in accounting is constantly changing, so when dealing with practical problems, many accounting theoretical concepts will become complex and difficult to understand, but also provide us with new ideas. That is, if these accounting vocabulary are explained by mathematical theory and replaced in the process of learning, many problems will become logical. For example, the cost and square mentioned above, in fact, is just a common theory in mathematics.

3.2 Application of Mathematical Thinking in Accounting

Mathematical thinking is also called mathematical thinking, and mathematical thinking plays a very important historical role in the evolution of human history. The goal people pursue is to simplify the complexity, that is, to use the most concise mathematical theory to summarize the difficult mathematical ideas. Therefore, in the field of accounting, we can often simplify complex problems and turn decay into magic by using mathematical thinking.

3.2.1 Profit Forecasting Method

Based on the premise of sTable business income, this paper analyses, calculates and studies the factors that affect profits such as sales volume, service cost and labor wastage, and then forecasts and estimates the profits that enterprises can achieve in a certain period of time. In the field of accounting, profit forecasting refers to the establishment of a corresponding mathematical model using the company's existing revenue and expenditure data, which is aided by a computer program. The most commonly used method of profit forecasting is cost-volume-profit analysis. Fully known as “cost-business volume (production or sales volume) - profit analysis method”, also known as profit and loss balance analysis method, mainly based on the change relationship between cost, business volume and profit, to analyze the impact of the change of one factor on other factors.

3.2.2 Analytic Hierarchy Process

The core of accounting is not only the number, but also the thinking of the meaning behind the number. Analytical Hierarchy Process (AHP) is a decision analysis method proposed by Professor Sardison, an American operational researcher, which combines qualitative and quantitative methods

to solve multi-objective complex problems. According to the actual situation, we can turn complex problems into multi-level structures, solve them layer by layer and break through one by one. Or the essence of mathematical thinking is to simplify the complexity.

4. The Future Development of Mathematics and Accounting

Nowadays, accounting has developed very well. Of course, there are some areas needing improvement. Mathematics plays a very important role in it. But if we want to further improve accounting and find out the existing problems, we need to use mathematical theory and methods to discover mathematics and accounting. On this basis, continue to improve accounting, so that mathematical theory and methods can be better applied in accounting.

The wide application of mathematics in accounting not only provides an analytical and measuring tool for accounting, but also fundamentally changes the angle and attitude of looking at and analyzing problems, and makes people have a new idea of the essence of a series of problems in accounting. At the same time, in order to solve the new problems in practice, it will also put forward new requirements for the development of mathematics, thus pointing out the direction for the further development of mathematics research. This shows that not only mathematics itself is developing continuously, but also it is complementary to the development of accounting. This process is endless, which is also in line with the law of philosophical development. Therefore, it is a general trend to pay attention to the application of mathematics in accounting.

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