



<https://www.ijmsbr.com/>

Impact Factor: 6.049

DOI: 10.5281/zenodo.

## Research on Higher Education Costs Using the Full Costing Approach

Author Details: XiaoDin Zhou

### Abstract:

*Research on the costs of higher education is crucial for the effective management of educational resources and the provision of high-quality education. This study employs the full costing method, considering both direct costs (such as faculty salaries, textbooks, and equipment expenses) and indirect costs (such as administrative overhead and facility depreciation), as well as fixed and variable costs. The research reveals that the cost structure of higher education is intricate, influenced by various factors including academic disciplines, student enrollment, teaching methods, as well as external factors like policy environments and geographical locations. Furthermore, there exists a delicate balance between enhancing education quality and cost control that needs comprehensive consideration. By delving into the costs of higher education, policymakers and educational institutions can better plan resource allocation, enhance educational efficiency, and achieve sustainable development in higher education.*

**Key words:** Higher Education Costs; Full Costing Method; Resource Allocation

### 1. Introduction

**Concept of Higher Education Cost:** Higher education cost refers to the various resources and expenses incurred by higher education institutions to provide education and training services, ensuring expenditures for students to receive high-quality education. Higher education costs are a comprehensive concept that encompasses all the resources and expenses required to provide high-quality education, including both direct and indirect costs, fixed and variable costs, student expenses, and external funding support. This concept is crucial for higher education institutions and policymakers as it aids in understanding and planning financial management and resource allocation in universities.

**Government Accounting System:** Based on the various situations that higher education faces in implementing the new "Government Accounting System," universities should confirm and specify their assets and liabilities, determining the recognition timing precisely. This is done to establish accounting and generate financial reports, further strengthening the effectiveness of the university's financial accounting system. The impact of the "Government Accounting System - Accounting Subjects and Reports for Administrative Institutions" on university department final accounts is also significant. The adoption of the accrual basis enhances the accuracy of higher education cost accounting. The introduction of the new "Government Accounting System" has led to reforms in the higher education cost accounting system, divided into three aspects: fee policies, accounting reforms, and cost supervision. This article provides an overview of these three aspects of reform, considering the reasons for changes in related policies and regulations as well as development trends. To align the higher education cost accounting system with government accounting reforms, it is essential to establish detailed rules and an applicable system, which is the key to system coordination.

The Ministry of Finance has issued two guidelines, namely the "Guidelines for Cost Accounting in Public Institutions - Higher Education Institutions" (referred to as the "Specific Guidelines") and the "Guidelines for Cost Accounting in Public Institutions - Scientific Research Institutions." This move aims to establish a comprehensive government cost accounting guideline system to standardize cost accounting practices in higher education institutions and scientific research institutions. According to the "Specific Guidelines," higher education institutions are required to collect and allocate the costs of teaching activities to various departments, forming departmental teaching costs, and subsequently allocating and calculating student teaching costs.

As an integral part of public institutions and one of the accounting entities regulated by the new system, higher education institutions must accelerate research on the accounting of educational costs in accordance with policies and guidelines such as the "Government Accounting System" and the "Specific Guidelines." Firstly, it is essential to deepen the government accounting reform. This is a crucial step in establishing a sound educational cost accounting system for higher education institutions and ensuring compliance with financial regulations while standardizing cost accounting practices.

Secondly, higher education institutions need to comprehensively implement budget performance management. Currently, relevant departments such as the Education Bureau and Finance Bureau have introduced new requirements for overall performance management of educational costs and research funding in higher education institutions. In 2021, the Ministry of Finance issued the "Central Department Project Expenditure Core Performance Goals and Indicators Setting and Valuation Guidelines (Trial)" (Finance Budget [2021] No. 101), elevating cost indicators to primary indicators. This shift allows for the evaluation of the effectiveness of national policies and project budget funds in terms of cost, reflecting various economic costs. The issuance of specific guidelines has effectively standardized the accounting of educational costs in higher education institutions and provided information support for the performance management system of educational cost in these institutions. Third, raising the internal management level and operational efficiency of university departments is essential. Conducting educational cost accounting allows higher education institutions to identify key areas of resource consumption. This, in turn, enables them to engage in targeted cost management activities, making decisions related to process optimization, project selection, asset acquisition, and other matters more scientifically. This ultimately enhances resource allocation efficiency and the effectiveness of fund utilization.

Fourth, determining the reasonable allocation of educational resources within university departments and establishing related cost compensation standards is crucial. Concerning the management and application of scientific and technological achievements, strengthening cost accounting within university departments helps determine the input costs of scientific and technological achievements. This provides a value reference for the transformation and application of these achievements in the market and offers a more scientific basis for pricing and cost compensation.

## 2. Accounting Methods

There are several feasible methods for accounting for higher education costs, and these methods can be chosen and combined based on specific needs and objectives. Here are some common methods for higher education cost accounting:

**Full Costing:** This is one of the most common methods, considering all direct and indirect costs related to educational activities. Full costing includes costs incurred by the education provider (such as teacher salaries and classroom rent) and costs incurred by the education recipient (such as student living expenses). This method provides a comprehensive insight into the total costs of the entire education process.

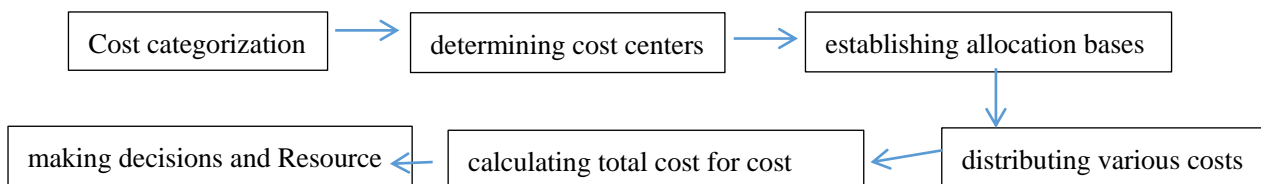
**Activity-Based Costing (ABC):** This method allocates costs to specific educational activities or projects to gain a more accurate understanding of the costs associated with each activity. ABC helps universities identify which activities have higher costs and which require lower resource allocation, thus optimizing

resource distribution.

**Standard Costing:** Standard costing compares actual costs with standard costs to assess the efficiency of resource utilization. This method helps universities identify areas that need improvement to align costs with expected standards.

## 2.1 Full Costing

The full costing method, as an accounting approach, plays a significant role in the research of the university education cost accounting system. According to the newly issued "Specific Guidelines" in 2023, applying the full costing method in cost accounting system research means incorporating all costs related to educational operations into the scope of accounting. This includes various costs such as operational activity expenses and unit management expenses, and all these costs are collected and allocated to the respective cost accounting objects. This method helps universities gain a more comprehensive understanding of the true costs of educational activities and provides more accurate data support for financial decision-making, cost control, and resource allocation. Therefore, the full costing method plays a crucial role in university education cost accounting.



First, costs can be categorized into different types based on various criteria:

**Direct Costs vs. Indirect Costs:**

**Direct Costs:** Costs directly related to educational activities, such as teacher salaries, textbook expenses, laboratory equipment, etc.

**Indirect Costs:** Costs that are not directly associated with specific educational activities, such as campus maintenance, administrative work, library operations, etc.

**Fixed Costs vs. Variable Costs**

**Fixed Costs:** Costs that do not change with variations in the number of students or educational activities, such as facility rent and administrative staff salaries.

**Variable Costs:** Costs that change with variations in the number of students or educational activities, such as textbook expenses and laboratory supplies.

**Direct Personnel Costs vs. Indirect Personnel Costs**

**Direct Personnel Costs:** Employee salaries directly related to teaching, such as teachers and teaching assistants.

**Indirect Personnel Costs:** Employee salaries indirectly related to teaching, such as administrative staff and library personnel.

**Student Costs vs. Non-Student Costs**

**Student Costs:** Costs associated with students, such as teaching, student support services, and scholarships.

**Non-Student Costs:** Costs not related to students, such as administrative management and campus facilities maintenance.

**Program Costs vs. Infrastructure Costs**

**Program Costs:** Costs associated with specific courses or programs, such as the expenses for offering a particular course.

**Infrastructure Costs:** Costs related to campus infrastructure and services, such as electricity, water supply, and campus maintenance.

The classification of higher education costs helps institutions better understand and manage resources,

create budgets, optimize resource allocation, and comprehend the cost structure of educational activities. Different universities may adopt various classification methods based on their own needs and management objectives.

Secondly, we need to have a clear definition of cost centers, meaning we need to specify the objects of cost accounting. Dividing cost centers is done to better manage and account for the costs of different departments or activities within an organization, in order to gain a more accurate understanding of resource utilization and make informed decisions. The next step after defining cost centers is determining cost objects. Cost objects are the specific projects or activities for which costs are to be accounted, and they are typically related to the responsibilities of the cost center. For example, in a university, the entire institution is often considered a cost center, but it can be further subdivided into different colleges, departments, projects, or courses, depending on the need for cost accounting objects.

Once the cost center is clearly defined, the crucial phase of cost allocation begins. In this phase, it is essential to precisely define the basis for cost allocation, which serves as the standard or guideline for distributing various costs. These allocation criteria often include factors closely related to educational activities, such as student enrollment, teaching hours, course credits, and more. During this step, ensuring that the selected cost allocation criteria closely align with the actual distribution of costs is of paramount importance. The success of this process directly impacts the accuracy, fairness, and feasibility of cost accounting.

In summary, upon establishing a well-defined cost center, the next critical step is to articulate the basis for allocating costs, specifying how various expenses will be distributed. These criteria typically revolve around factors directly linked to educational activities, such as student numbers, teaching hours, and course credits. Ensuring that the chosen allocation criteria accurately reflect the actual cost distribution is crucial, as the effectiveness, fairness, and practicality of cost accounting hinge on this decision.

When determining the basis for cost allocation, it's essential to consider the following key factors comprehensively:

**Accuracy:** The chosen basis for allocation should accurately reflect the actual distribution of costs among different cost centers. This ensures the precision of cost accounting data, providing a reliable basis for decision-making and resource management.

**Fairness:** The allocation basis should be fair and equitable to ensure that each cost center is treated fairly in terms of resource allocation. This helps establish good internal cooperation and resource coordination, avoiding dissatisfaction and conflicts arising from uneven resource distribution.

**Practicability:** The allocation basis should be practical, meaning it can be effectively used in practice. This includes ensuring that the selected basis can be quantified and monitored in real-world situations for the purpose of cost allocation and accounting.

Once the allocation basis is determined, cost allocation is performed. Based on the specified allocation basis, costs such as direct costs and indirect costs are allocated to various cost centers. The sum of all costs allocated to a cost center represents the total educational cost for that center.

Finally, after all cost allocation and allocation have been completed, a cost report should be generated to display cost information for each cost center. This cost information can be used for budgeting, decision-making, performance evaluation, and cost control, ensuring that cost information provides practical value for organizational management and decision-making. It helps optimize resource allocation and improve the efficiency and quality of educational activities.

### **3. Optimization Recommendations for Higher Education Cost Accounting System**

#### **3.1 Cost breakdown or cost itemization**

To ensure that all costs of the university are detailed, including direct and indirect costs. Direct costs are typically costs that can be directly associated with specific educational activities or projects, while

indirect costs are those that are difficult to allocate directly to specific activities or projects. It is essential to identify and clarify the sources and distribution methods of these costs.

Differentiating between direct costs and indirect costs: Firstly, it is essential to clearly distinguish between direct costs and indirect costs. Direct costs are those that can be directly attributed to specific educational activities or projects, such as textbook expenses or teacher salaries. In contrast, indirect costs are those that cannot be directly allocated to specific activities or projects, such as administrative expenditures or equipment depreciation.

Cost categorization: Cost itemization requires classifying costs based on their nature and source to better understand the composition and variations of costs. Common cost categories include labor costs, material costs, equipment costs, administrative costs, and more.

Cost sources: For each cost item, it is necessary to trace its specific source. For instance, labor costs may originate from teacher salaries, staff salaries, etc., while material costs may come from textbooks, lab materials, and so on. Clarifying the sources of costs helps gain a better understanding of the cost structure.

Cost allocation methods: For indirect costs, determining their allocation methods is essential. This involves deciding which indirect costs should be assigned to specific educational activities or projects and selecting appropriate allocation bases. Common allocation bases can include student enrollment, instructional hours, course credits, and others.

### **3.2 Establishing an effective data collection and recording system**

Employee Salary Data Collection: Ensure the collection of employee salary data, including salary information for teachers, administrative staff, and other personnel. These data should include various components of compensation such as basic salary, allowances, bonuses, etc. To ensure the accuracy and timeliness of salary data, it often requires collaboration with the human resources department and the use of modern payroll management systems to record and update this information.

Equipment Depreciation Data Recording: If a university utilizes equipment and assets for educational activities, it is essential to accurately record the depreciation of these assets. Equipment depreciation is a significant indirect cost item that can impact the total cost of educational activities. It is recommended to use accounting software or asset management systems to track equipment depreciation and ensure accurate depreciation calculations in accordance with accounting standards.

Material Procurement and Inventory Data: Universities typically need to purchase materials such as textbooks, laboratory supplies, office supplies, and more. Establish a material procurement and inventory management system to track the procurement, usage, and inventory status of these materials. This helps ensure accurate calculation of material costs and timely procurement of needed materials to support educational activities.

Data Storage and Protection: The collected data should be stored in secure and reliable systems and protected by appropriate data security measures. This includes data backups, access control, and data encryption, among other security measures, to ensure data integrity and confidentiality.

### **3.3 Effective Cost Control and Analysis**

University management can use cost accounting data to formulate budgets. By understanding the various cost elements of educational activities, management can plan and allocate financial resources more accurately. This helps ensure the financial sustainability of the university and provides funding support for various projects and initiatives. Cost accounting can also be used to assess the university's performance. By comparing actual costs to budgeted costs, management can determine which educational activities or projects have costs higher than expected and which costs have been effectively controlled. This information helps management take measures to improve performance and reduce unnecessary costs.

To elaborate further, cost accounting serves as more than just a component within financial reporting; it holds a pivotal role in the effective management of universities. Its applications extend beyond financial



reporting and play a crucial role in supporting various aspects of university management. Let's delve into some of these key functions:

**Financial Planning:** Cost accounting provides valuable insights into the allocation of financial resources within a university. By examining various cost elements related to educational activities, management gains a clearer understanding of where financial resources are directed. This understanding forms the foundation for robust financial planning, enabling universities to allocate budgets efficiently and strategically. As a result, cost accounting contributes significantly to ensuring the financial sustainability of the institution.

**Performance Assessment:** Universities can utilize cost accounting to evaluate their performance comprehensively. By comparing actual costs with budgeted costs, management gains insights into which educational activities or projects may have exceeded expected expenses and which costs have been effectively controlled. This information empowers decision-makers to identify areas for improvement and take corrective measures, ultimately enhancing overall institutional performance.

**Decision-Making:** Cost accounting data is invaluable when it comes to making informed decisions. University administrators can rely on cost accounting insights to assess the financial implications of various options or strategies. For instance, when considering the launch of new educational programs, cost accounting can provide a clear picture of the associated costs, aiding in decision-making regarding resource allocation and pricing structures.

**Resource Optimization:** Cost accounting facilitates resource optimization within universities. It helps identify areas where resources may be misallocated or underutilized. By pinpointing these inefficiencies, management can make data-driven decisions to reallocate resources, streamline processes, and improve cost-effectiveness. This contributes not only to financial efficiency but also to the overall quality of educational services.

In conclusion, cost accounting is a multifaceted tool that goes beyond financial reporting. It is an essential instrument for effective university management. By providing insights into financial planning, performance assessment, decision-making, and resource optimization, cost accounting empowers university leaders to navigate the complex financial landscape and achieve their institution's goals with greater precision and efficiency.

## References:

- i. Wang Lin. Liu Yan. *Research on Higher Education Cost Accounting - "Based on the Basic Guidelines for Cost Accounting of Public Institutions"*. Jiangsu Business Forum. (2021)06.
- ii. Hang Qin San. Guo Rui. *Cost Accounting of Higher Education in the Government Accounting System*. Friend of Accounting. (2019)03
- iii. Chen Jia Wei. *Optimization Research on the Educational Cost Accounting System of F University under the Background of the New Government Accounting System*. Chongqing University of Technology. (2022)

