

The Determination of Student Cost in Higher Educational Institutions: A proposed framework for Prince Sattam bin Abdulaziz University

تحديد تكلفة الطالب في مؤسسات التعليم العالي - إطار مقترح لجامعة الأمير
سظام بن عبد العزيز

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Abstract :

The focus of this study is to propose a method through which student cost is measured at Prince Sattam bin Abdulaziz University (PSAU). Cost accounting practices were used to measure, analyze, and report financial information related to the costs of using resources at PSAU. The framework of cost accounting system is used to estimate the cost of student at PSAU. In specific, the cost of student can be calculated in three levels, namely; the university, the college and the department levels. In more details, the cost of student at PSAU can be classified based on the type of college which include: scientific colleges, health

colleges, human colleges, and community colleges. The outcomes of this study are important in determining the budget allocations for educational institutions and the method of their implementation in order to rationalize the use of the available resources in an optimal way. Further, the use of cost information gives ability and flexibility in planning and controlling the activity of educational institutions and achieving the greatest benefits.

Keywords: *student cost, university, Saudi Arab*

تحديد تكلفة الطالب في مؤسسات التعليم العالي - إطار مقترح لجامعة الأمير سظام بن عبد العزيز

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الخلاصة :

الكلية بالجامعة حيث تشمل : الكليات الصحية ،
والكليات الإنسانية ، وكليات المجتمع . وتعتبر نتائج
هذه الدراسة مهمة لتحديد مخصصات الموازنة
للمؤسسات التعليمية وطريقة تنفيذها من أجل
ترشيد استخدام الموارد المتاحة بالشكل الأمثل .
بالإضافة إلى ذلك ، فإن استخدام المعلومات
التكاليفية يعطي القدرة والمرونة في مجال التخطيط
والرقابة في المؤسسات التعليمية وتحقيق أكبر قدر
من المنافع .

الكلمات المفتاحية :

تكلفة الطالب ، الجامعة ، المملكة العربية
السعودية.

تركز هذه الدراسة على وضع إطار مقترح
يتم من خلاله قياس تكلفة الطالب في جامعة الأمير
سظام بن عبد العزيز (PSAU) . حيث تم استخدام
ممارسات محاسبة التكاليف لقياس وتحليل والتقرير
عن المعلومات المالية المتعلقة بتكلفة استخدام الموارد في
جامعة الأمير سظام بن عبد العزيز (PSAU) . وفي
هذا الإطار تم استخدام نظام محاسبة التكاليف
لتقدير تكلفة الطالب في جامعة الأمير سظام بن عبد
العزيز . وعلى وجه التحديد ، فقد تم احتساب تكلفة
الطالب على ثلاثة مستويات، وهي على مستوى
الجامعة ، وعلى مستوى الكلية ، وعلى مستوى القسم
 . ويتفصيل أكثر ، يمكن تبويب تكلفة الطالب في
جامعة الأمير سظام بن عبد العزيز بناءً على نوع

1. Background of the study

Considering the continuous improvement in the education sector in recent times, Kazem and Ghadeer (2015) note that the department of university service provision has experienced tremendous development resulting in rapid growth in science in different fields of knowledge. These improvements are largely attributed to the recent upsurge in demand for university services and the unprecedented increase in the financial funding on the areas mentioned above. Universities are classified among the most strategic learning institutions based on financial allocation and human resources investment. Moreover, the financial allocation for universities represents a long-term investment that separates their funding from traditional budgeting. Al-Azzawi (2009) and Jan (2013) add that universities are categorized under direct not-for-profit institutions considering that they consistently register an upward trend in their spending, which brings the need to use effective accounting tools to rationalize this kind of spending. One of the dominant concerns is the lack of effective governmental accounting and accountability on the universities' spending to provide the management with satisfactory cost data that can be used to measure, analyze, and report the cost of educational services. As a result, estimating the cost related to these services is pegged on non-scientific grounds. Additionally, the lack of standards of estimating the necessary needs essential in achieving the objectives of education programs, coupled with the inability to measure costs to prepare university students accurately, has led to ambiguities that engulf the spending indicators. According to Al-Azzawi (2009), this has subsequently limited the ability to make sound decisions, planning, controlling, and performance evaluation.

Cost accounting being the process of measuring, analyzing, and reporting financial as well as nonfinancial information associated with the cost of using or acquiring resources in an organization, plays a critical role in helping organizations to estimate their production costs, profitability, cost control, and inventory valuation. Considering its effectiveness and accuracy cost accounting in cost estimation, experts cite that firms should consider using this accounting tool and its application in service institutions for better financial reporting. Moreover, it provides vital financial information to determine the cost service in preparation to compare them with the service provision (Datar & Rajan, 2018). Fadel (2013) adds that the higher education planning process requires the integration of tangible education requirements with those of the national economy as human cadres, which in effect increases the efficiency of the system in higher education, apply a better cost

management approach, reduce related costs, and use its material resources appropriately. Even though some research studies have been conducted regarding the cost of students in universities evidence shows that studies are yet to be conducted to investigate the cost associated with studying in the Saudi Arabia universities (Al-Azzawi, 2013; Kazem & Ghadeer, 2015; Amir, Auzair, Maelah, & Ahmad, 2012). The primary aim of this study is to propose an effective cost method that can be used in determining the accurate cost of studying in a public university by identifying the cost elements of educational services, either direct or indirect, and associated costs of providing the university services.

Notably, this study contributes significantly to the existing literature in many ways. For example, the study examines the role of cost accounting, particularly in the education and service sectors. Also, the study provides vital financial information regarding the cost of a university student, which is critical in the determination of budget allocations for educational institutions as well as the methods of their implementation to rationalize the optimal use of the available resources. Similarly, the utilization of cost information provides the flexibility and ability in planning and controlling the activities of various educational institutions, thereby achieving better financial outcomes.

The rest of the paper continues as follows. The next section briefly highlights the cost accounting and student cost. The third section describes the procedures for calculating the cost of a university student. The forth section determines the components of student cost. The final section discusses how to determine the cost of the university student according to the elements of the general budget.

2. Cost accounting and student cost

Cost accounting is the process of recording, examining, summarizing and studying the cost of a company that is spent on any process, service, or product in the organization. Cost accounting assists the management of an organization in controlling costs and taking strategic planning and decision making about improving cost efficiency. Cost accounting can be used to determine the cost of a university student for the purpose of achieving four main goals (Al-Azzawi, 2009; Kazem & Ghadeer, 2015; Fadel, 2013):

- A) Determine the actual costs for the university student.
- B) Cost control.

- C) Providing the necessary data to serve the planning purposes.
- D) Help in setting policies and rationalizing administrative decisions.

The cost of a university student can be calculated on three levels, according to the following equations:

- (1) Calculating the university student cost at the university level

$$\text{Student cost in the university} = \frac{\text{Total university expenses}}{\text{The number of university students}}$$

- (2) Calculating the cost of the university student at the college level

$$\text{Student's cost in college} = \frac{\text{Total college costs}}{\text{The number of college students}}$$

- (3) Calculating the university student's cost at the level of the scientific department

$$\text{Student's cost in the science section} = \frac{\text{The total costs of the department}}{\text{The number of students in the department}}$$

Also, the cost of a university student can be calculated according to the type of college according to the following: -

- (1) The cost of a university student in scientific colleges
- (2) The cost of a university student in health colleges
- (3) The cost of a university student in human colleges
- (4) The cost of a university student in community colleges

3. Procedures for calculating the cost of a university student

For the purpose of calculating the student's cost on the university, there are several steps and procedures to reach the required results, which are (Al-Azzawi, 2009; Kazem & Ghadeer, 2015; Fadel, 2013):

- 1- Studying the organizational structure of the university.
- 2- Determine the cost centers.
- 3- Determine the components that make up the student's cost.
- 4- Assigning costs to cost centers.
- 5- Defining and distributing the indirect costs to the cost centers.

By looking at the university's administrative structure, it is possible to define cost centers and service centers and to identify the nature of the tasks performed by each academic or administrative unit, it becomes possible to define cost centers in the university as the nature of the activity imposed the use of a set of criteria when determining the cost centers from them.

- 1- The cost center should have a clear and specific link to the administrative structure.
- 2- Smoothing the inputs and outputs of the cost centers.
- 3- The relative importance should be the cost center. An appropriate size and to a degree that makes it possible to allocate a large percentage of items for direct costs to it, and units can be classified into cost centers of a similar nature as they were divided into:

- 1- Educational cost centers.

The educational cost centers represent those centers that were established for the purpose of providing the educational service, and they include colleges with their scientific departments, which can be classified according to the following:

(1) Scientific colleges

- College of Business Administration
- College of Engineering
- College of Computer Science and Engineering
- College of Engineering- Wadi Aldwaser

- College of Business Administration- Hotat Bani Tamim
- (2) Health colleges
 - College of Pharmacy
 - College of Medicine
 - College of Dentistry
 - College of Applied Medical Sciences
 - College of Applied Medical Sciences- Wadi Addwasir
- (3) Humanities colleges
 - College of Education
 - College of Education- Dellam
 - College of Education- Wadi Addwasir
 - College of Arts and Science- Wadi Addwasir
 - College of Sciences and Humanities
 - College of Sciences and Humanities- Hotat bani Tamim
 - College of Sciences and Humanities- Slayel
 - College of Sciences and Humanities- Aflaj
- (4) Community Colleges
 - Community College
 - Community College- Aflaj

Cost centers supporting the public and educational process.

Educational cost centers are the units of cost whose final costs will be calculated, and in contrast, the cost centers that serve and support the educational process are considered. These costs represent general or joint costs that are committed to implement the main activities and are distributed to the activities of the university in all its colleges using an appropriate basis that takes into account the factors affecting the benefit events. These centers include the following:

(1) University Council

(2) University Rector

- Consultants
- The Consultant and General Manager of Rector Office
- Administrative of Follow-up
- Administrative of Publics Relation and Media
- Legal Administrative
- Internal Audit Unit

- Intellectual Awareness Unit
- Excusive Manager of University Hospital
- Secretariat of The University of Awqaf

(3) Vice Rector

- Deanship of Human Resources
- Deanship of Information Technology and Distance E-Learning
- Deanship of Community Services and Continuing Education
- Administrative of Project Management
- Administrative of Operations and Maintenance
- Administrative of Financial and Administrative Affairs
- Administrative of Security
- Administrative of Safety
- Administrative of Manpower Planning
- Administrative of Investment and Internal Resources
- Administrative of Housing for Faculty Members

(4) Vice-Rectorate of Postgraduate Studies and Scientific Research

- Deanship of Postgraduate Program
- Deanship of Scientific Research
- Deanship of Library Affairs
- Institute of Researches and Consultants Services

(5) Vice-Rectorate of Education and Academic Affairs

- Deanship of Admission and Registration
- Deanship of Students' Affairs

(6) Vice-Rectorate of Development and Quality

- Deanship of Development and Quality
- Executive Manager of Strategies Planning
- Statistical Information Office
- Center for Records and Archives.
- Initiatives Management Office

(7) Vice Rector for Branches

(8) Vice-Rectorate of Female Students Affairs

4. Determine the components of student cost

Cost elements are categorized at the university based on the state's general budget tabs for the university, as these include the following:

- 1- Workers compensation.
- 2- Goods and services.
- 3- Funding expenses.
- 4- Subsidies.
- 5- Grants.
- 6- Social benefits
- 7- Other expenses
- 8- Capital Assets

The above cost elements are calculated based on the data and information provided by the university's financial records except for the depreciation of capital assets that are calculated after the inventory of fixed assets costs based on inventory and accounting records and inventories of capital assets according to the principles approved in the financial instructions.

Table 1: The total of the university expenses

No.	Types of costs	Expenses	%
1	Workers compensation		
2	Goods and services		
3	Funding expenses		
4	Subsidies		
5	Grants		
6	Social benefits		
7	Other expenses		
8	Depreciation expense		
	Total		100%

The costs of educational centers are determined according to the following schedule:

Table 2: The total of the colleges' expenses

No.	college	Workers compensation	Goods and services	Funding expenses	Subsidies	Grants	Social benefits	Depreciation expense	Other expenses	Total
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Total										

The costs allocated to cost centers supporting the educational and public process can be classified according to the following table:

Table 3: The total expenses of the cost centers supporting the educational and general processes

No.	Center	Workers compensation	Goods and services	Funding expenses	Subsidies	Grants	Social benefits	Depreciation expense	Other expenses	Total
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Total										
A percentage to the total expenses										

5. Determining the cost of the university student according to the elements of the general budget

The cost of a single university student is determined by the following formula:

The cost of a single university student = college expenses + distributed share of the expenses of centers supporting the educational and public process

The number of students in the college

The results are displayed according to the following table:

Table 4: The cost of the student based on the college and the cost centers' expenses

No.	College	Expenses	%
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
Total			

6. Conclusion

The aim of this study was to provide a method for calculating the university student cost at Prince Sattam bin Abdulaziz University (PSAU). The cost of PASU's student can be measured, analyzed and reported using the cost accounting practices at three levels, namely; the department, the college and the university. In specific, the college level can also be divided into four categories which are the scientific college, health colleges, human colleges, and community colleges. This study recommends for the PSAU university and other universities elsewhere to concern and take care of using a clear and accurate method in calculating the student cost because the ignorance of this issue would result in a weak planning for the budget allocations related to the educational sector will be the result. This, consequently, may influence the governmental agencies in rationalizing the use of the available resources which may affect negatively the national economy.

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