Received: May 2023 Accepted: June 2023 DOI: https://doi.org/10.58262/ks.v11i02.012

The Effect of Performance Focused Activity-Based Costing Technique in Measuring the Cost of Consultancy Services: An Applied Study in the Office of Scientific and Consultancy Services – University of Technology

Qassem Jawad Kazem¹, Sabiha Barzan Al-Obaidi²

Abstract

The aim of this research is to implement the Performance Focused Activity Based Costing System in scientific and consultancy offices at the The University of Technology. The purpose is to measure the cost of services provided by these offices in order to reduce expenses and calculate the cost of consultancy services according to traditional systems. Additionally, the study seeks to calculate the cost of consultancy services based on the proposed model, which relies on the Performance Focused Activity Based Costing System to achieve more accurate cost calculations. To test the research hypothesis, the study was conducted in the consultancy offices of the The University of Technology. The most significant findings reveal that relying on traditional cost measurement methods and techniques renders these offices unable to keep pace with the developments in the business environment. In contrast, adopting the Performance Focused Activity Based Costing System is capable of reducing costs and enabling these offices to sustain their operations over the years.

Keywords: Performance Focused Activity Based Costing System, consultancy offices, cost of services.

Introduction

The contemporary business environment in various economic and service sectors has witnessed significant developments, along with advancements in information technology. This has prompted businesses to take measures to ensure their survival and continuity in the competitive market. Various competitive priorities, such as time, flexibility, cost, and quality, have been adopted by these businesses to meet the needs and requirements of their customers. Consequently, large industries have emerged, producing a diverse range of goods and services, aligned with technological advancements. (Almasarweh et al., 2022)

As a result of this progress, the significance of cost accounting in providing detailed data and real-time information to manage these economic and service units efficiently has become evident. Management in these diverse units has begun to seek modern cost management methods to achieve their objectives, including the adoption of the Performance Focused Activity Based Costing (PFABC) technique (Pinem & Listyorini, 2022).

¹ PhD student, University of Baghdad - Higher Institute of Accounting and Financial Studies, Baghdad, Iraq Email: qassimaltimemi@gmail.com

⁰⁷⁸³⁶³³⁶⁶³¹

² Professor, University of Baghdad - Higher Institute of Accounting and Financial Studies, Baghdad, Iraq. Email: <u>sabehabarzan@gmail.com</u> 07014980407

⁰⁷⁸¹⁴³⁸⁰⁴²⁷

150 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... Conceptual Framework - Performance Focused Activity Based Costing (PFABC)

The definition of Performance Focused Activity Based Costing (PFABC) can be described as a system that identifies the actual costs of each activity separately and with high precision. It takes into consideration the appropriate cost drivers, providing flexibility as some activities may have non-time-related cost drivers. Furthermore, PFABC serves as a tool for allocating indirect costs, evaluating performance, and providing accurate and suitable information for control and decision-making (Mansour et al., 2016, p. 165; (Ginting et al., 2022). On the other hand, Naaman defines it as a cost method distinguished by its high accuracy in calculating the cost of the produced unit and furnishing management with precise and relevant information for control, performance evaluation, and improvement of various decisions (Naaman, 2017, p. 6; (Zhang et al., 2022).

The researcher believes that PFABC relies on computing the actual cost of each activity independently, using the appropriate cost drivers. It differentiates itself by depending on multiple cost drivers, setting it apart from its predecessors.

Steps for implementing the (PFABC) technique

To apply the (PFABC) approach, the following steps must be followed:

Step One: Determining Major Activities

This stage bears resemblance to the initial step of the ABC system (first generation). During this phase, the characteristics and expenditure patterns associated with each activity are discerned, aspects that were excluded in the TDABC system (second generation) later on. (Namazi, 2009:36; (Dierksmeier, 2022).

Step Two: Identifying the Actual Resources Utilized for Each Activity

Employees responsible for executing and designing specific activities determine the exact type and quantity of resources actually used for each activity. (Al-Shiblie, 2017:49; (Kasim et al., 2023).

Step Three: Determining the Real Rate of Each Resource Activity

In the (PFABC) system, the actual rate for each activity is individually computed based on various operational programs and factual data acquired from the facility. This is accomplished by dividing the actual costs by the appropriate cost driver assigned to each activity. (Al-Obaidi, 2020:27; (Syaufi et al., 2023).

Step Four: Calculating the Actual Cost of Resources Consumed for Each Activity

The precise cost of resources consumed for each activity is established by considering the cost behavior of the resource in question. If the resource's behavior is adaptable, it results in variable costs, which can be computed using the following formula:

Actual cost of resources consumed for each activity = Actual resource consumed for each activity * Actual rate of the resource consumed for each activity. (Namazi, 2009:37-39; (Idan, 2023).

The first approach: Flexible Costs Assignment Approach

Under this method, mandatory costs, such as machinery, labor, and information technology, are allocated as shared costs that should be distributed across multiple activities that share these expenses. The cost driver used to allocate or distribute costs under this approach is the flexible cost for each activity.

The second approach: Cost-Driver Assignment Approach

In this method, the cost manager of the cost center determines the cost driver for each activity, which can be achieved through the accounting information system, other systems, prior experience, and statistical methods.

The third approach: Weighted Average

The weight here is based on the quantity of resource consumption for each activity, and several factors are considered in determining the weight, such as the complexity of activity performance, the time required to perform a specific activity, or the amount of resources consumed.

The fourth approach: Net Realizable Value

This approach focuses on estimating the revenues and profits that activities can potentially generate. While these estimates can be challenging for accountants, they are not difficult or complex tasks for employees and management involved in the process. (Namazi: 2009, 37-40; Tolmay, 2022).

The Fifth Approach: Multi-Criteria Decision Model

This approach involves multiple activities that require various cost drivers, including quantitative, qualitative, or descriptive factors. The final choice among these five approaches for resource allocation depends on several factors, such as the amount of available information, management preference for a particular method, and the level of accuracy required for cost allocation. (Al-Mayali, 2020:32; Phuong, 2023).

Step Five: Calculating Activity Standard Rate

The activity standard rate is estimated using various means, such as work measurement techniques, market mechanisms, internal and external benchmarks, and the potential use of statistical methods like regression analysis and time series. (Al-Mayali, 2020:33).

Step Six: Calculating Activity Price Variance

The price variance is calculated by multiplying the actual resources required for each activity by the standard rate of the consumed resources. The resulting value is then subtracted from the actual cost of the activity, determining the price variance by comparing actual costs with the flexible budget in the following ways:

If Flexible Budget > Actual Cost, it signifies an unfavorable variance.

If Flexible Budget < Actual Cost, it denotes a favorable variance.

If Flexible Budget = Actual Cost, it indicates no variance. (Al-Obaidi, 2020:29).

Step Seven: Calculating the Costs of Implemented Activities

This step is similar to the Time-Driven Activity-Based Costing (TDABC) approach. However, the Performance-Focused Activity-Based Costing (PFABC) approach explicitly studies the behavior of consumed resources, classifying them as either flexible or committed resources, as illustrated in the following equation: (Al-Obaidi, 2020):

Cost charged for obligated resources = (standard quantity of resources * quantity of actual work) * standard price of obligated resources

152 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... The load is calculated according to the following relationship:

Cost of implemented obligatory resources = (standard resource for unit production * quantity of actual work) * standard price of obligatory resources

8- Step Eight: Calculating the Quantity Variance

This stage entails evaluating whether the production manager has utilized resource quantities in the actual production of a particular product or service that surpass the standard amounts. It serves as an assessment of the production manager's performance. (Melani, 2013:294).

This variance is unique to the PFABC system and is determined by considering the flexible budget and actual resources utilized. There are three scenarios for this evaluation:

If FB < AR, it indicates an undesirable deviation and a negative performance evaluation. If FB > AR, it indicates a desirable deviation and a positive performance evaluation. If FB = AR, it indicates no deviation.

Step Nine: Calculating the Productivity of Each Activity The productivity of each activity is considered one of the most crucial pieces of information in the process of evaluating management performance, which is not present in both (ABC\TDABC). However, it is deemed a vital step in the activity-based performance-focused cost approach. Productivity is measured through (Namazi, 2009:41):

Productivity = Efficiency + Effectiveness

If the actual < budget, it indicates a desirable deviation and positive efficiency. If the actual > budget, it indicates an undesirable deviation and negative efficiency. If the actual = budget, it indicates no deviation

The difference in efficiency reveals whether the designated resources, such as time, have been used effectively or not. As a result, it provides insight into the effectiveness of managers responsible for setting wage and salary rates, as well as the efficiency of the production manager. Conversely, the variance in effectiveness indicates whether the planning manager has achieved the predetermined objectives or not. (Namazi, 2009:41).

Secondly - Consultancy Services

Diverse definitions of consultancy services have been presented by authors, researchers, and organizations. The American Institute of Certified Public Accountants (AICPA) categorizes it as professional management consultations with a primary focus on improving clients' efficiency and effectiveness in achieving organizational goals through the optimal use of available resources and efforts (Enforceable MAS Standard Draft Issued 1981:3). Conversely, the Iraqi Business Management Association views it as professional work conducted by trained and qualified individuals who offer scientific assistance and support to managers in various institutions and establishments (Journal of Iraqi Business Management, 1970:10). Arthur Schulte's perspective, however, depicts it as qualified individuals providing managerial services by offering guidance and support based on established rules without decision-making authority (Arthur Schulte, 1966:723).

The Applied Aspect - Application Steps for the University of Technology's Scientific and Consultancy Services Office.

Step One: Identifying Core Activities: The following table outlines the activities carried out by the Consultancy Office at the The University of Technology:

Table	(3):	Core	Activitie	es and	Utilized	Resources	in t	he Scient	ific and	Consultancy	Services
Office	– Th	ne Uni	versity of	of Tecl	hnology						

	Activities	Resources used in the activity
1	designs numbers	Engineering experts - materials - machinery and equipment
2	Operating laboratories and conducting tests	Engineering experts - materials - machinery and equipment
3	Checking the technical specifications of roads and bridges	Engineering experts
4	Consultancy and construction services	Engineering experts
5	Consultancy services for auditing studies	Engineering experts
6	Consultancy services for preparing studies	Engineering experts
7	Carrying out design calculations for tanksLPG) capacity of 10 tons	Engineering experts - materials - machinery and equipment
8	Installation of gas units No8	Engineering experts - materials - machinery and equipment
9	Consultancy services for the installation of gas units	Consultants - machinery and equipment
10	Project survey services	Engineering experts - materials - machinery and equipment
11	Conducting soil investigations and approving plans	Engineering experts - materials - machinery and equipment
12	Providing Consultancy services for the design of a rest house	Consultants
13	Conducting soil investigations for residential complexes	Engineering experts - machinery and equipment
14	Various services/oil companies	Engineering experts - machinery and equipment

Source: prepared by the researcher based on the data of the Office of Scientific and Consultancy services - University of Technology.

Each activity executed in the sample represents contracts undertaken by the Scientific and Consultancy Services Office at the University of Technology the year 2017, totaling 14 contracts, all of which represent core activities of the office.

3-2-1-2 Step Two: Identifying the Actual Resources Used for Each Activity

This step focuses on selecting the bases for cost allocation to allocate indirect costs to products or services.

	Basis for allocation		
1	Direct working hours	10,000	
2	Scanning times	2000	
3	Machine operating hours	1000	
4	setup times	3000	
5	Equipment cost	5,000,000	
6	audit times	50	
7	design times	20	
8	design hours	500	
9	space	2000 square meters	
10	Number of employees	50	

Table (4): Identifying the Actual Resources Used for Each Activity

154 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ...

	Basis for allocation		
11	cost of buildings	200,000,000	
12	maintenance times	100	
13	Installation times	20	
14	maintenance hours	500	
15	Installation hours	100	
16	setup hours	200	
17	audit hours	80	
18	examination hours	300	
19	scanning times	70	
20	scanning hours	350	

Source: The researcher based on the data of the Consultancy office - University of Technology From the above table, the allocation bases adopted by the Scientific and Consultancy Services Office at the The University of Technology for each activity undertaken by the office are observed.

3-2-1-3 Step Three: Determine the Actual Cost of Resources Consumed for Each Activity

The actual cost of each activity is calculated based on the data obtained from consultancy offices, including both flexible and fixed elements.

Table (5): Determining the Actual Cost of Resources Consumed for Each Activity (Flexible and Fixed).

Details	productivity	2017 dinars/total	Flexible costs	Inflexible costs
Maintenance				
Services:				
Building Maintenance	1,000,000	2500250	700,000	300,000
Maintenance of machinery and equipment	5,000,000	5,686,000	2,000,000	3,000,000
Transportation maintenance	0	829,000	0	0
Research and Consultancy services	1200000000	1538495186	500,000,000	700,000,000
Advertising and hospitality				
Advertising	0	11,272,000	0	0
Publish and print	0	924,000	0	0
hospitality		2484950	0	0
Transfer, dispatch and communication				
General contacts		1,639,000	0	0
Fixed asset rental		· · ·		
Transport and transportation rental	0	2,688,000	0	0
Miscellaneous service expenses				
Bonus for non- working people		2,915,000	0	0
	Details Maintenance Services: Building Maintenance Maintenance of machinery and equipment Transportation maintenance Research and Consultancy services Advertising and hospitality Advertising Publish and print hospitality Transfer, dispatch and communication General contacts Fixed asset rental Transport and tr	DetailsproductivityMaintenanceServices:Building1,000,000Maintenance1,000,000Maintenance of5,000,000equipment0Transportation0maintenance1200000000services1200000000Services0Advertising and hospitality0Advertising0Publish and print0hospitality120000000Transfer, dispatch and communication1General contacts1Fixed asset rental0Transport and transport and transportation0rental0Miscellaneous service expenses1Bonus for non- working people1	Detailsproductivity2017 dinars/totalMaintenanceServices:Building1,000,0002500250Maintenance1,000,0005,686,000equipment0829,000Transportation maintenance0829,000Research and Consultancy12000000001538495186Services1200000001538495186Advertising and hospitality011,272,000Publish and print0924,000hospitality2484950Transfer, dispatch and communication1,639,000Fixed asset rental1Transport and transport and transportation0Qeneral contacts1,639,000Fixed asset rental1Miscellaneous service expenses2,915,000Bonus for non- working people2,915,000	Detailsproductivity2017 dinars/totalFlexible costsMaintenance Services: $1,000,000$ 2500250 $700,000$ Maintenance of machinery and $5,000,000$ $5,686,000$ $2,000,000$ equipment 120000000 $5,686,000$ $2,000,000$ Transportation maintenance 0 $829,000$ 0 Research and Consultancy 120000000 1538495186 $500,000,000$ services 120000000 1538495186 $500,000,000$ Advertising and hospitality 0 $11,272,000$ 0 Advertising and hospitality 0 $11,272,000$ 0 Transfer, dispatch and communication $1639,000$ 0 Fixed asset rental $1,639,000$ 0 Transport and transport a

www.KurdishStudies.net

Directory number	Details	productivity	2017 dinars/total	Flexible costs	Inflexible costs
3367	Training and qualification fees	375,000	375,000	0	75,000
3369	Other expenses		2446892		
	Audit fees		5025000	0	
	Conferences and seminars		6,399,000	0	
	Depreciation of fixed assets				
	Extinction of means of transportation and transmission	0	6,165,625	0	
	Depreciation of Furniture	3,000,000	10511113	0	3,000,000
	Miscellaneous transfer expenses				
383	Donations to others		10,000,000	0	10,000,000
384	taxes and fees	30,000,000	59944497	20,000,000	19944497

Source: The researcher based on the data of the Office of Scientific and Consultancy services - University of Technology

It is noted from the above table that the third step of the Progressive Formulation and Activity-Based Costing (PFABC) technique involves calculating the production costs from the total actual consumed resources and dividing the production costs into flexible and fixed costs.

Table (6)	: Flexible	and Fixed	Costs
-----------	------------	-----------	-------

I		Flexible material			
materials	Stationery	Supplies and missions	fuel and oils	cost purposes	
30,000	70,000	50,000	0	Contract for design preparation	
160,000	90,000	30,000	600,000	Contract for laboratory operation and conducting tests	
40,000	20,000	60,000	0	Contract for technical specifications auditing of roads and bridges	
70,000	30,000	90,000	0	Consultancy and construction services contract	
50,000	40,000	30,000	0	Contract for consultancy services to review studies	
100,000	60,000	80,000	0	Contract for consultancy services to prepare studies	
40,000	10,000	70,000	0	Consultancy contract for conducting design calculations for a 10-ton LPG tank	
500,000	120,000	75,000	1,700,000	Consultancy and construction services project for the installation of 8 gas units by the International Free Company	
60,000	60,000	65,000	500,000	Consultancy and construction services project for the installation of gas units by the International Free Company	

156 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ...

T. (1. 11.1		Flexible material		
materials	Stationery	Supplies and missions	fuel and oils	cost purposes
80,000	50,000	30,000	400,000	Contract for surveys of the Abu Ghreib project in Maysan Governorate
200,000	100,000	10,000	300,000	Contract for soil investigations, verification, and approval of telecommunications tower foundations for the installation of 76m tall communication towers project sites
50,000	80,000	30,000	0	Provision of engineering consultancy services for designing a rest house at the Holy Karbala branch
130,000	70,000	10,000	500,000	Contract for soil investigations for a horizontal residential complex project in Salah al-Din Governorate
5447050	1,200,000	370,000	1,000,000	Oil company contracts
6957050	2,000,000	1,000,000	5,000,000	Total direct and indirect materials for all contracts.

Source: The researcher based on the data of the Office of Scientific and Consultancy services - University of Technology

	Inflexible	Flexible wages /	Cost numeros
	wages	incentive bonuses	Cost purposes
1	1,000,000	15,000,000	Contract for design preparation
2	800,000	1,200,000	Contract for laboratory operation and conducting tests
3	500,000	900,000	Contract for auditing technical specifications of roads and bridges
4	800,000	11,500,000	Consultancy and construction services contract
5	1,000,000	10,500,000	Contract for consultancy services to review studies
6	900,000	5,100,000	Contract for consultancy services to prepare studies
7	800,000	7,000,000	Consultancy contract for conducting design calculations for a 10-ton LPG tank
8	-	0	Consultancy and construction services project for the installation of 8 gas units by the International Free Company
9	1,000,000	3,000,000	Consultancy and construction services project for the installation of gas units by the International Free Company
10	1,200,000	12,000,000	Contract for surveys of the Abu Ghreib project in Maysan Governorate
11	-	0	Contract for soil investigations, verification, and approval of telecommunications tower foundations for the installation of 76m tall communication towers project sites
12	800,000	12,000,000	Provision of engineering consultancy services for designing a rest house at the Holy Karbala branch
13	1,500,000	11,000,000	Contract for soil investigations for a horizontal residential complex project in Salah al-Din Governorate
14	11376806	60,800,000	Oil company contracts
	21676806	150,000,000	Total direct and indirect expenses.

Table (7) Flexible and inflexible wages

Source: The researcher based on the data of the Office of Scientific and Consultancy services - University of Technology

The table above demonstrates that the wage costs have been divided into flexible wage costs and fixed wage costs for the implementation of the Progressive Formulation and Activity-Based Costing (PFABC) technique in the third step, to determine all direct and indirect cost elements.

3-2-1-4 Step Four: Determining the Actual Rate of Each Resource Activity

The actual rate of each activity's cost is calculated by dividing the actual costs of each activity by the cost driver and the three cost elements, as illustrated in the following equation:

Actual Activity Rate = Actual Costs of the Activity / Activity Cost Driver

Actual load rate	Activity amount	Cost driver	Inflexible costs	Details indirect production costs	Directory number
33121	100	maintenance times	300,000	Building maintenance	3000
3313	500	maintenance hours	3,000,000	Machinery and equipment maintenance	6000
332	1000	Direct working hours	700,000,000	Research and consultancy services	700,000
3367	10,000	Direct working hours	75,000	Training and qualification wages	7.5
	30,000,000	Furniture cost	3,000,000	Depreciation of furniture	0.1
383	10,000	Direct working hours	10,000,000	Donations to others	1000
384	2000 square meters	space	19944497	Taxes and fees	9972

Table (8): Actual Activity Rate

Source: The researcher based on the data of the Office of Scientific and Consultancy services - University of Technology.

Through the above table, the actual rate for each activity cost has been calculated as follows: (Actual Costs / Activity Cost Driver). For instance, the building maintenance costs were calculated as (300,000 / 100) = 3,000 per load, and the same process was applied to all other costs.

3-2-1-5 Step Five: Calculating the Activity Standard Rate

The standard rate for each activity is determined through various methods, including relying on estimations provided by accountants and administrators. The researcher sought the input of experts to establish these rates. Additionally, this step requires estimating the standard resources needed for each activity.

158 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... **Table (9):** Activity Standard Rate

Details/indirect production costs	cost driver	Standard load rate
Building Maintenance	maintenance times	3500
Maintenance of machinery and equipment	maintenance hours	5000
Research and Consultancy services	Direct working hours	500,000
Training and qualification fees	Direct working hours	6
Depreciation of Furniture	Furniture cost	0.1
Donations to others	Direct working hours	900
taxes and fees	space	10,000

Source: The researcher based on the data of the Office of Scientific and Consultancy services - University of Technology.

After calculating the standard rate for each activity, the expertise of specialists was relied upon to determine the standard rates and identify the standard resources required for applying Performance-Focused Activity-Based Costing (PFABC) technique. Additionally, the data from Step Two was utilized to determine the cost driver.

3-2-1-6 Step Six: Calculating Activity Price Variance

The activity price variance is calculated by multiplying the actual resources for each activity by the standard rate and then subtracting the result from the actual costs. Subsequently, the actual cost is compared to the flexible budget cost to determine the extent of the price variance's appropriateness. This comparison is illustrated in the following tables:

Details/indirect	t	Actual Standard		Activity	Standard Nature O		
production	Deviation	flexible	cost	Quantity	load rate	Deviation	
costs		costs	cost	Quantity	1040 1410	Deviation	
Building	50,000+	300,000	350,000	100	3500	Suitable	
Maintenance							
Maintenance of						Not	
machinery and	-500,000	3,000,000	2,500,000	500	5000	not	
equipment						suitable	
Research and						NI-t	
Consultancy	-200,000,000	700,000,000	500,000,000	1000	500,000	INOt	
services						suitable	
Training and	15,000	75.000	60.000	10,000	6	Not	
qualification fees	-13,000	75,000	00,000	10,000	0	suitable	
Depreciation of	0	2 000 000	2 000 000	20.000.000	0.1	.1 *	
Furniture	0	3,000,000	3,000,000	30,000,000	0.1	nothing	
Donations to	1 000 000	10,000,000	0.000.000	10,000	000	Not	
others	-1,000,000	10,000,000	9,000,000	10,000	900	suitable	
	EEEO2 I	10044407	20.000.000	2000 square	10.000	: t - b 1 -	
taxes and rees	55505+	19944497	20,000,000	meters	10,000	suitable	
Flexible materials	2,000,000	8,000,000	10,000,000	2000	5000	suitable	
C1 '11	525000000	450.000.000	07 500 000	1000	07500	Not	
Flexible wages	52500000))	150,000,000	97,500,000	1000	97500	suitable	
0 771	1 1 1	.1 1	TT 1 1 (A) 1	77.1.1 (0)			

Table (10): Activity Price Variance for Flexible Costs

Source: The researcher based on the data of Table (4) and Table (9)

Through the table above, the deviation of activity prices has been calculated as follows: (Standard loading rate calculated in step five X quantity of activity in step four) to determine the standard cost and compare it with the actual inflexible costs. For instance, the maintenance costs for buildings were calculated as $(3500 * 100) = \pounds 350,000$ as the standard cost, and the deviation for building maintenance was determined as $(\pounds 350,000 - \pounds 300,000) = \pounds 50,000$, a favorable deviation. The same process was applied for all flexible costs.

Cost details	Deviation	Actual costs	Standard costs	Activity Quantity	Standard load rate	Nature of deviation
direct materials (inflexible)	42950	6957050	7,000,000	1000	7000	Not suitable
direct wages (inflexible)	323194	21676806	22,000,000	2000	11,000	Not suitable
Building Maintenance	50,000	700,000	750,000	100	7500	Not suitable
Maintenance of machinery and equipment	250,000	2,000,000	2,250,000	5000	450	Not suitable
Research services	50,000,000	500,000,000	490,000,000	1000	490,000	suitable
taxes and fees	1855503	19944497	21,000,000	2000	10500	Not suitable

Table (11): Deviation of Activity Prices for Inflexible Costs

Source: The researcher based on the data of Table (4) and Table (10).

The above table illustrates the standard loading rate for materials, wages, and inflexible indirect costs, along with the quantity of activity for each of them, determining the standard costs.

Step 7: Calculating the Costs of Implemented Activities

In this step, the costs of implemented activities are determined using the following equation:

Implemented Activity Costs = (Standard quantity of resources * Actual quantity of work) * Standard price of resources. The following table presents the results:

Inflexible (fixed) costs.	The standard price of resources	actual work amount	standard quantity	Total
Building Maintenance	3500	100	110	38,500,000
Maintenance of machinery and equipment	5000	500	480	1200000000
Research and Consultancy services	500,000	1000	900	450000000000
Training and qualification fees	6	10,000	9500	57,000,000
Depreciation of furniture	0,1	30,000,000	31,000,000	93,000,000
Donations to others	900	10,000	12,000	10800000000
taxes and fees	10,000	2000	1500	300,000,000,000
Inflexible direct materials	7000	1000	950	6650000000
Inflexible direct wages	11,000	2000	2100	46200000000

Table (12): Deviation of Activity Prices for Inflexible Costs

Source: The researcher based on the data of Table (4) and Table (8).

160 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... The above table shows the inflexible costs applied, their standard and actual quantities, and the standard price for each activity. The costs of the applied activities were calculated according to the following

Total costs for inflexible building maintenance = (standard quantityX actual quantity) X standard price

 $= (110 \times 100)^{1} \times 3500$ 385000 =

And so on for the rest of the inflexible costs of materials, wages and indirect costs

Flexible costs	The standard price of resources	actual workload	standard quantity	Total
Building Maintenance	7500	100	98	73,500,000
Maintenance of machinery and equipment	450	500	550	123,750,000
Research and Consultancy services	490,000	1000	1100	539000000000
taxes and fees	10500	2000	2050	43050000000
direct (flexible) materials	5000	2000	2200	22000000000
direct wages (flexible)	9750	1000	1050	10237500000

Table (13): Flexible Incurred activity costs

Source: The researcher based on Table (4) and Table (9).

3-2-1-8 Step Eight: Calculating Quantity Variance:

The performance of consultancy offices is measured, which were not present in the previous entries of ABC. In this context, the Flexible Budget and Applied Resources are taken into account to calculate the quantity variance using the following equation:

QV=(AQ*SP)-(SQa*SP) Where: QV = quantity deviation AQ = Amount of Actual Resources Used SP = resource standard price SQa = standard resource quantity for actual production

The following tables show the results

Table (14): Calculating the Quantity Variance for Inflexible Resources.

costs	deviation	Incurred costs	standard for a produ standa	l quantity actual actionx ard rate	Standard costs	standard Stand	quantity× ard rate	nature of deviation
Building Maintenance	35,000	350,000	3500	100	385,000	3500	110	suitable
Maintenance of machinery and equipment	(100,000)	2,500,000	5000	500	2,4 00,000	5000	480	Not suitable

costs	deviation	Incurred costs	standar for prod stand	d quantity actual uctionx lard rate	Standard costs	standar Stand	d quantity× dard rate	nature of deviation
Research services	50,000,000))	500,000,000	500,000	1000	450,000,000	500,000	900	suitable
Training and qualification fees	3000))	60,000	6	10,000	57,000	6	9500	Not suitable
Depreciation of furniture	100,000	3,000,000	0.1	30,000,000	3,100,000	0,1	31,000,000	suitable
Donations to others	1,800,000	9,000,000	900	10,000	10,800,000	900	12,000	suitable
taxes and fees	500000))	20,000,000	10,000	2000	15,000,000	10,000	1500	Not suitable
Inflexible direct materials	350000))	7,000,000	7000	1000	6 , 650 , 000	7000	950	Not suitable
Inflexible direct wages	1,100,000	22,000,000	11,000	2000	23,100,000	11,000	2100	suitable
C 71	1	1 1	1 1.	CT 11 /	F) 17T 11	(10)		

Source: The researcher based on the data of Table (5) and Table (12).

Table (15) Calculating	g quantity	deviation	for flexible	resources
------------------------	------------	-----------	--------------	-----------

Costs	deviation	Incurred costs	Stand quantit actu product standare	ard y for al tionx d rate	Standard costs	standa quanti Standare	ard ity× d rate	Nature of Deviation
Building Maintenance	15000))	750,000	7500	100	735,000	7500	98	Not suitable
Maintenance of machinery and equipment	22500))	225,000	450	500	247,500	450	550	Not suitable
Research services	49,000,000	490,000,000	490,0 00	1000	539,000,000	490,000	1100	suitable
taxes and fees	525,000	21,000,000	10500	2000	21,525,000	10500	2050	suitable
Flexible direct materials	1,000,000	10,000,000	5000	2000	11,000,000	5000	2200	suitable
suitable	487,500	9,750,000	9750	1000	10,237,500	9750	1050	
-								

Source: The researcher based on the data of Table (9) and Table (12).

Through the above table, the standard costs for the cost elements (materials, wages, flexible indirect costs) were calculated through the standard quantity multiplied by the standard rate and compared with the charged costs that were calculated for the cost elements (materials, wages, flexible indirect costs) calculated through (the standard quantity multiplied by the standard rate). PFABC.

3-2-1-9 The ninth step: Calculating the productivity of each activityCalculating the Productivity Each Activity)

It is the last step in the performance-based activity-based costing methodPFABC, in which the productivity of each activity is calculated by adding the efficiency deviation and the effectiveness deviation as follows:

Efficiency skew = price skew + quantity skew Effectiveness deviation = costs of implemented activities - costs of planned activities 162 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... And as in the table below

costs	Efficiency deviation	quantity deviation	price deviation	Nature of Deviation
Building Maintenance	85,000	35,000	50,000	Preferred
Maintenance of machinery and equipment	(600,000)	(100,000)	(500,000)	Not preferred
Research services	(70,000,000)	(50,000,000)	(20,000,000)	Not preferred
Training and qualification fees	(18000)	(3000)	(15000)	Not preferred
Depreciation of furniture	100,000	100,000	0	Preferred
Donations to others	800,000	1,800,000	(1000000)	Preferred
taxes and fees	580503	525,000	55503	Preferred
Inflexible direct materials	307050))	(350,000)	42950	Not preferred
Inflexible direct wages	164,306	487,500	323194	Preferred

Table: (16): Efficiency deviation

Source: Based on Table (10) and Table (14).

The table above illustrates the efficiency deviation of the Scientific and Consultancy Services Office at the Technological University for Resources in the year 2017, based on the data of Step (6) indicating the deviation of activity prices, and the data of Step (8) revealing the quantity deviation. Productivity deviation is calculated using the following equation:

Productivity = efficiency deviation + effectiveness deviation

costs	The amount of productivity deviation	efficacy deviation	Efficiency deviation	Nature of Deviation
Building Maintenance	120,000	35,000	85,000	Preferred
Maintenance of machinery and equipment	700,000)	(100,000	(60,000)	Not preferred
Research services	(120,000,000)	50,000,000))	(70,000,000)	Not preferred
Training and qualification fees	(21000)	3000))	(18000)	Not preferred
Depreciation of furniture	200,000	100,000	100,000	Preferred
Donations to others	2,600,000	1,800,000	800,000	Preferred
taxes and fees	80503	500000))	580503	Preferred
Inflexible direct materials	(657050)	350,000	(30705)	Not preferred
Inflexible direct wages	1264303	1,100,000	164,306	Preferred

Table: (17) Calculating productivity deviation

Source: Based on Table (11) and table (15).

Based on the information provided in the previous investigations (both theoretical and practical), it can be demonstrated that the fundamental hypothesis "the implementation of Performance-Focused Activity-Based Costing (PFABC) technique in the sample of research consultancy offices contributes to improving the measurement of consultancy services costs."

Conclusions

- 1. The theoretical study reveals that the activity-based performance-focused cost approach provides measures for price, quantity, and efficiency variances for flexible resources, as well as budget and capacity variances for committed resources. It aids in measuring the productivity of each activity through the analysis of efficiency and effectiveness elements.
- 2. Implementing the PFABC technique in consultancy offices can lead to the establishment of an efficient administrative system that contributes to planning, controlling, and evaluating performance.
- 3. The application of PFABC in consultancy offices helps in accurately determining the cost of services
- 4. The practical aspect of PFABC in consultancy offices demonstrates the accurate cost determination of activities and working towards reducing them, leading to increased profitability.
- 5. The implementation of the activity-based performance-focused cost approach aids in measuring the cost of consultancy services with greater accuracy for contracts and projects in the researched consultancy offices, thereby increasing profits.
- 6. The intensifying competition among units has encouraged the continued pursuit of discovering new techniques such as PFABC to reduce costs, increase profits, and enhance performance, indicating that cost accounting is undergoing continuous development.

References

- Almasarweh, M. S., Al-Rawashdeh, O. M., Wadi, S. A., Alnawaiseh, M. B., & Al-Rawashdeh, F. (2022). Risk Management and Financial Performance of Insurance Companies in Jordan. *Social Space*, 22(1), 112-142. <u>https://socialspacejournal.eu/menu-script/index.php/ssj/article/view/9</u>
- Al-Mayali, A. M. (2020). Using costing technique based on performance-based activities to evaluate performance in economic units. College of Administration and Economics, University of Baghdad.
- Al-Obeidi, R. R. (2020). The possibility of applying costing method based on activity based on performance (PFABC) to improve performance: An applied study in Mosul Dairy Factory.
- Al-Qastawi, I. A. S. (2016). Activity-Based Costing for the Purposes of Performance Evaluation as a Proposed Introduction to Developing Performance Management: An applied study in the contracting sector in Egypt (Master's thesis). Faculty of Commerce, Alexandria University.
- Al-Sahn, M. F. (1997). Professional Services Marketing: An Exploratory Study to Measure the Attitudes of Senior Management in Egyptian Companies Toward University Consultancy Services. Journal of the Faculty of Commerce for Academic Research, Faculty of Commerce, University of Alexandria.
- Al-Shibli, S. A. M. (2017). Measure costs on a performance-based activity basis to improve profitability. College of Administration and Economics, Al-Qadisiyah University.
- Bloom, P. (1984). Effective for Professional Services. Harvard Business Review, p.102-110.

Enforceable MAS standard Draft Issued. (1981). Journal of Accountancy, p.3.

Dierksmeier, C. (2022). Krause's ethics as a precursor to capability theory. *European Journal for Philosophy of Religion 14*(2), 83-107. <u>https://doi.org/10.24204/ejpr.2022.3591</u>

- 164 The effect of Performance Focused Activity-Based Costing technique in measuring the cost of Consultancy services: ... Ginting, L., Kamello, T., & Yamin, M. (2022). The Principle of Horizontal Separation in Banking Guarantee Practices in Indonesia. *Cuadernos de Economía*, 45(128), 61-70. https://cude.es/submit-a-manuscript/index.php/CUDE/article/view/263
- Hassoun, L. N. (2018). The Role of the Performance-Based Activity-Based Costing System (PFABC) in Achieving Institutional Excellence: A field study at Babel Bank. Tikrit Journal of Administrative and Economic Sciences, 4(44), Part 1, University of Tikrit College of Administration and Economics.
- Idan, A. M. (2023). The Role of Exports, Development, Imports, and Trade Openness on the Economic Growth in Iraq: Assessment Using the Ardl Cointegration Method. *International Journal of Economics and Finance Studies*, 15(1), 80-100. <u>https://sobiad.org/menuscript/index.php/ijefs/article/view/1412</u>
- Iraqi Business Administration Journal. (1970). The Scope and Importance of Consultancy Services, (Issue 6), Baghdad: Iraqi Business Administration Association.
- Kasim, A., Rimi, A. M., & Purnamasari, A. I. (2023). Restorative Justice to Prevent Village Fund Corruption Crimes: A Constitutional Law and Indonesian Criminal Law Perspective. *International Journal of Criminal Justice Sciences*, 18(1), 97-112. <u>https://ijcjs.com/menuscript/index.php/ijcjs/article/view/601</u>
- Kowsari, F. (2013). Changing in costing models from traditional to performance focused activity based costing (PFABC). European Online Journal of Natural and Social Sciences, 2(3), special Issue on Accounting and Management, 2497-2508.
- Namazi, M. (2009). Performance Focused ABC: A Third Generation of Activity Based Costing System. Cost Management Journal, 23(5), Sep/Oct 2009; ABI/INFORM Global.
- Phuong, V. T. (2023). Factors Affecting the Learning of English Proverbs and Idioms of English-Majored Students at University of Khanh Hoa, Vietnam. *Eurasian Journal of Applied Linguistics*, 9(1), 35-47. <u>https://ejal.info/menuscript/index.php/ejal/article/view/442</u>
- Pinem, R. J., & Listyorini, S. (2022). Green Business Strategy: Optimization of Green Products towards Export Opportunities of SMEs Products. *AgBioForum*, 24(3), 25-33. <u>https://agbioforum.org/menuscript/index.php/agb/article/view/159</u>
- Sarokolaeia, M. A., Bahreinib, M., & Bezenjanic, P. F. (2013). Fuzzy Performance Focused Activity Based Costing (PFABC). Social and Behavioral Sciences, 75(2), 346-352. Retrieved from www.sciencedirect.com.
- Schulte, A. A., et al. (1975). Compatibility of auditing and management services. Perspectives in Auditing, p.421.
- Syaufi, A., Zahra, A. F., & Gholi, F. M. I. (2023). Employing Forensic Techniques in Proving and Prosecuting Cross-border Cyber-financial Crimes. *International Journal of Cyber Criminology*, 17(1), 85-101. <u>https://cybercrimejournal.com/menuscript/index.php/cybercrimejournal/article/view/150</u>
- Tolmay, A. S. (2022). The moderating effect of trust on relationship value in automotive supply chains. *International Journal of Operations and Quantitative Management, 28*(3), 43-61. https://submissions.ijoqm.org/index.php/ijoqm/article/view/127
- Zhang, W., Yang, X., Tao, K., Zhu, Y., & Zhang, M. (2022). Influence of Media Framing on Cognition of COVID-19 Vaccine Effectiveness: The Mediating Role of Emotions. *American Journal of Health Behavior*, 46(4), 423-441. <u>https://doi.org/10.5993/AJHB.46.4.4</u>