

EMPLOYING A RESOURCE CONSUMPTION AND COST ACCOUNTING SYSTEM BASED ON TIME-ORIENTED ACTIVITIES TO ACHIEVE A COMPETITIVE ADVANTAGE - AN APPLIED STUDY

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Abstract

Costs playing an essential role in all manufacturing companies, so many companies are interested in searching for tools and methods that reduce costs as one of the most important factors of success for these companies, and in light of what Iraqi manufacturing companies suffer from intense competition due to the invasion of foreign products to the markets at low prices compared to the product. The local, which is characterized by the high cost of its production, as well as the adoption of traditional methods in production and in calculating costs, all of this has an impact on the company's competitive ability, so this research aims to shed light on modern cost systems because of their role in achieving competitive advantage, and these systems include accounting for resource consumption and costs. On the basis of time-oriented activities, the role of these two systems is to achieve optimal utilization of resources and reduce costs by separating and excluding idle energy. Where the two systems were employed and applied in the heaters factory of the General Company for Electrical and Electronic Industries

INTRODUCTION

The large and rapid developments that the business environment is witnessing, most notably the technological developments and the resulting information revolution, economic developments, the spread of multinational companies, the liberalization of trade between countries, which cast a shadow on the manufacturing systems that relied on automation to a large degree, as most of the operations became in Industrial economic units ranging from research and development, design, production, marketing and distribution depend. Sophisticated technological methods, so it was necessary for those units to reconsider the traditional cost systems and adopt modern administrative techniques that enable them to provide products and services of high quality and low costs to face intense competition and to ensure survival and continuity in the market. In order to face the shortcomings of traditional costing systems, many modern costing systems have emerged since the eighties of the twentieth century and the following, including activity-based costs, specifications-based costs, time-oriented activities costs, operations-based costs, and resource consumption accounting system..... And others, that the resource consumption accounting system is an accounting system that analyzes and tracks resources and is used in energy measurement and management, in identifying pools of resources and linking specific resources with activities, and works on the optimal use of resources based on the quantitative measurement of what is consumed of

resources and thus helps management in identifying unused energy sources, as well. The costing system based on time-oriented activities focuses mainly on defining two factors (the number of time units needed to complete the activity and the unit cost of time), as it depends on time in determining the cost engine to load cost goals with its share of resource costs .

THE FIRST AXIS: - PREVIOUS STUDIES AND RESEARCH METHODOLOGY

First: previous studies

- **Study Al-Hafiz. Al-Rawi, 2018 :** Target this the study to me statement capacity System Accounting consumption Resources on me Management costs in Banks commercial Jordanian From During Dimensions Next : present the information Occasion, and reduction costs, and improve Quality output Accounting costs for banks commercial . Where I showed the study that there a role positive system (RCA) in scale down costs in Banks commercial Jordanian, Where be seen Individuals a sample search that this role represented in several things. most important this is things She : follow the cost, and select behavior the cost, and measure costs Resources used, and collect Resources inside groups homogeneous, and download the service on me amount Cost Resources used, And therefore scale down the cost and reduce modified growling .
- **Study Kurtul, Selcuk, 2020:** The study aimed to determine and exclude idle energy by applying the RCA system, in addition to reducing costs in the hotel (a five-star hotel in Antalya, Turkey), and the most important findings of the study Is that the application of the RCA system helps in measuring costs more objectively than the systems that preceded it, and thus helps to make correct decisions because of its identification and management of idle energy costs.
- **Study Maria, Ferreira, 2017:** Aimed to me knowledge Bezel Relevance Application System TD-ABC in units Economic Producer and extent its potential in Solution problems Processes Productivity, about road design model experimental for TD-ABC. And she was highlight its results that System costs TDABC Appropriate environment production. And that able on me deal with fluctuations Processes productivity. And on Face selection Can for equations the time absorb mission different. As well as about that Application System TDABC he is less complicated in units Economic Productivity From systems that preceded him for being He approves on me Wave One and he time.
- **Alubaidy, Hadi, 2019 study:** I aimed to find out Concepts and importance highlighted Properties and features own system traditional costs And (ABC) and (TDABC) and comparison between them to determine which systems contribute in Continuation and glorify profitability for the unit Theme search. Its most notable result was that System TDABC is the fastest and the easiest in Application comparison by order Traditional and ABC Where you require This is the time system long for application, As well as About use it equations the time to customize costs Resources that lead to me Personalization objective for costs comparison with those systems .

That What He distinguishes search Present when Studies previous He combines both systems by employing them together highlighting Effect employ them in exclusion energy idle and the discount costs to achieve advantage competitiveness.

Second , the research methodology

A. Research problem: The Iraqi industrial economic units face many problems that resulted in their inability to compete for several reasons, including the invasion of imported products at competitive prices and quality, high production costs, poor interest in market studies to know the needs and desires of customers, and the lack of demand for local products. Adopting a traditional costing system in calculating costs. Some production machines and equipment are outdated compared to the technological development in manufacturing systems....etc. This makes it imperative for these units to reconsider production methods and the cost system and adopt modern systems and technologies to enable them to face this competition. Therefore, the research problem can be formulated in the following question:

Does employing RCA and TD-ABC systems contribute to a competitive advantage?

B. Research objectives : The research seeks to achieve the following objectives :

1. A statement of the cognitive pillars of the (RCA) and (TD-ABC) systems .
2. The application of two systems of accounting for resource consumption and costs on the basis of time-oriented activities in the company in question To achieve a competitive advantage.

C. Research hypothesis : To achieve the research objectives, the following main hypothesis was formulated :

(The employment of a system of accounting for resource consumption and costs on the basis of time-oriented activities contributes to achieving optimal utilization of resources and reducing costs and thus achieving a competitive advantage).

D. Research Methodology : The deductive method was adopted in preparing the theoretical side, as well as the inductive method and the descriptive analytical method in conducting the applied side of the research.

SECOND AXIS: THE THEORETICAL FRAMEWORK OF THE RESOURCE CONSUMPTION ACCOUNTING SYSTEM

First: Define the resource consumption accounting system

Researchers and writers differed about a comprehensive and agreed definition of the resource consumption accounting system RCA, and the reason for this is that this system is one of the recent trends in the field of cost and management accounting, which focuses on the reason for the existence of costs is resources. Therefore, there are many definitions of this system in the accounting literature, and therefore RCA is an integrated approach to the two activity-based cost systems ABC and the German flexible marginal costing system GPK , which tracks resource consumption to cost centers and the basic content of the ABC system is to allocate

resource cost to the activity, which represents a resource-oriented improvement (Yang, 2021:2), and knew him Paksoy on he One of the contemporary management accounting systems that combines the importance attributed to resources by the German management accounting system and the activity perspective of the costing system on an active basis . American. (Paksoy, 2022:6)

Second: The objectives of the resource consumption accounting system

RCA system aims to achieve (Yousry, 2017:4), (Blocher, et.al, 2019:157).

- Optimal exploitation of resources, exploitation of idle energy, and support of the competitiveness of the economic unit by reducing production costs and avoiding deficiencies in traditional systems.
- Providing more accurate details in calculating costs by increasing the number of cost centers and thus increasing the opportunity to trace costs directly to products and services (dependence of cost allocation on the principle of causation only).

Third: Elements of the resource consumption accounting system

- **Resources:** Resources According to the RCA accounting system, resources are represented in everything that is included in the operational process of the economic unit, which is the main source of cost and the subject of cost measurement. The RCA system is based on resources rather than activities (Wang, Zhuang, 2009; 89).
- **Cost Pools:** It is divided into cost pools related to resources. The resource pool measures the product of a homogeneous group of resources within one pool, which represents an element of the resource elements represented by people, equipment, machines, various services and cost pools related to activities/operations. It represents a particular process of the production cycle within the unit to which a set of resources is allocated that the product consumes. This process is derived from the activity - based costing system (AI-Tavia, 2011:4).
- **Cost vectors:** They are also divided into resource cost vectors and activities or operations cost vectors.
- **Interlocking or reciprocal relationships between resources:** What is characterized by the resource consumption accounting system is that the consumption of resources does not depend on the role of activities in their consumption of resources, but it is necessary to determine the interconnected (reciprocal) relations between the resources available within the resource pools and among other resource pools, so the RCA It provides detailed information about all the interrelationships between resources and each other (AI-Rawi, AI-Hafiz, 2018:32-33)
- **Cost measurement topics (cost objective):** They represent the purposes to which costs are linked or the objective of cost creation (Hansen, et.al, 2006:24).

Fourth: The principles of the resource consumption accounting system

- **Principle of causation:** It is considered the most important among the principles of accounting for resource consumption because it is more rational and logical for the cost model, because this principle requires designing the flow of resources and the associated cost to reflect the cause and effect relationship, and this means excluding and removing arbitrary allocations between resource pools (Selcuk, Kurtlu, 2020: 265).) .
- **Response principle:** This principle describes the relationship between the amount of output of a product and the amount of input that must be used to produce this product (Moss, Ahmed, 2011:756) .
- **The work** This principle is based on an understanding of the unit's vision, strategy and competitive position, in the light of which the unit's resources flow through the activities that are being worked on and implemented to reach the final cost goals.(Al-Qady, 2013:60) .

THIRD AXIS: THE THEORETICAL FRAMEWORK OF THE COSTING SYSTEM BASED ON TIME-ORIENTED ACTIVITIES

First: the definition of the TD-ABC system

Time Directed Activities Based Costing (TDABC) system is generation Second From System Estimation costs on me Basis Activities (ABC) and he one most important phenomena modern in area Cost accounting and management accounting, which led to me Appearance of Revolution in area account the cost aggregate for products and services . Therefore, the definitions of this system have varied according to the opinions of writers and researchers, but they all fall into one destination, as (Yuesti et.al, 2021:510) defined it as a tool to simplify process Calculation costs From During Download costs Resources directly on me Goals the cost Building on me Activities that used equations time, so the flow TDABC Resembles System Estimation the cost traditional, But he Differs in Logic primary For the time dependent calculation. Galendi defined it as a system of computation costs it was completed develop it to customize costs Resources for products from during control Activities that Complete made in process production, Uses TD-ABC the time as an engine Unique to use Resources than Allow rated the cost efficiently and accuracy. In addition to me that, it Can from Investigation savings actual in costs and improve Operations. (Galendi, et.al, 2022:174)

Second: The elements of the TD-ABC system

Since the TD-ABC system is an extension of the (ABC) system it consists of its components in addition to:

- **Causes (vectors) of time:** are the variables or the characteristics used to calculate the time taken to perform a specific activity. (Scavenius, 2013; p33)

- **Time equations** : she equations sports From Degree first Complete created to estimate the time Total necessary To implement Activity a certain, with consideration factors that Increase From its time standard . Give Equations temporal Flexibility For TD-ABC in Confrontation Changes of manufacture Producer or Submit service in time the appropriate (Tejada, et.al, 2020: 20) .

Third: The advantages of the TD-ABC system

- Supporting operational and strategic decision-making in cost management and human capital management (Fedriasari, Kawahara, 2020 : 146) .
- that application TDABC is less complex than the application of other cost estimating systems, as well as quick response to any variables because it requires only two criteria, the unit cost of the activity and the time required to perform a transaction or activity (Elshaer, 2020 : 18).
- TD-ABC is inexpensive and easy to update; Easy to apply, and the system can be easily validated through direct observation of the estimated model of the time unit and the possibility of predicting future demand (Yesti, et.al, 2021 :514) .

FOURTH AXIS: - EMPLOYING THE RCA AND TD-ABC SYSTEMS TO ACHIEVE A COMPETITIVE ADVANTAGE

Units has become to achieve a competitive advantage, and to achieve this goal, the unit must use modern systems and technologies that are commensurate with the intensity of competition. Towards the atmosphere Cost, efficiency, innovation, time, and flexibility are in response to the growing customer requirements, as each economic unit seeks to provide its products and services to ensure competition and survival in the market. Therefore, the systems that meet these requirements have varied and varied. Some of them enter into manufacturing processes such as the production system in Limited time, lean manufacturing and cleaner production...etc., including systems that help in providing information and calculating costs in more fair ways, including those involved in manufacturing processes and calculating costs such as RCA and TD-ABC All of the above is in the interest of achieving competitive advantage. Based on the method of integrating the best characteristics of the ABC and GPK systems, in light of which the resource consumption accounting system was born, we employ some steps for both the RCA and GPK systems. TD-ABC in one framework to achieve a competitive advantage, through the following:

1. **Reducing the cost** : by excluding idle energy and not charging it to the cost of the product or service, thus achieving the (cost reduction) dimension of competitive advantage, this dimension is one of the important requirements that achieve customer satisfaction and attract new customers.
2. **Quality and efficiency** : through the optimal use of the unit's resources Excluding everything that does not add value to the product, improving the performance of activities that add value to the customer, and this is done by studying the relationship between inputs

and outputs, i.e. reducing the resources required to produce these outputs that the unit aims to produce without affecting the quality and efficiency of the product .

- 3. Time:** By reducing the time to perform the main activities that add value to the product, since the system provides accurate information about the time required to perform the activities and thus deliver the product in a timely manner.

Both RCA and TD-ABC can be employed to achieve a competitive advantage through the following steps:-

- Collect all unit resources into homogeneous pools.
- Determine the cost of each resource group
- Determine the practical power for each resource group
- Determining the actual energy on the basis of consumption of resources
- Determine the idle power
- Distribution of costs to production departments
- Calculation of the actual energy cost, the process
- Excluding the cost of idle energy to arrive at the cost of the final product

FIFTH AXIS: THE PRACTICAL ASPECT

An introduction to the General Company for Electrical and Electronic Industries

Company. The public for the electrical and electronic industries. It is one of the formations of the Ministry of Industry and Minerals, and it is considered one of the most important industrial sectors in the country, due to its establishment B - Manufacturing and assembling many products, such as (extinguishing equipment, transformers, water pumps, air-cooled engine, cooling conditioners, heaters, generatorsetc) The Company was established in 1965

Because of the importance of the heaters product, the heaters factory was chosen as a place for practical application, as the factory suffers from several problems, including the weak demand for the heater product, as the actual production volume for the year 2021 reached only 103 heaters, which represents only 17% of the available production capacity, as well as high production costs, The presence of a large idle energy, poor interest in market studies to identify the customer's requirements, in addition to the company's reliance on the traditional method of calculating the costs of the heater product by adopting the method (cost + profit), bearing in mind that the company adopts the cost accounting guide contained within the unified accounting system, and that the calculated cost For the heater according to this method, it does not represent the real cost of the heater because it includes incorrect estimates. The total cost of the heater was calculated at (104,00) dinars, plus a profit margin (35,000) dinars, and therefore the selling price of the product is (140,000) dinars, while the cost is The real value of the heater, after recalculation by the researcher, amounted to (2,714,359) dinars regular RCA and TD-ABC We will do the following steps:

First: - Inventory of the total resources of the plant and grouping them into homogeneous complexes

This step is considered one of the most important steps of the application, as it represents the most important steps of applying resource consumption accounting because resources are the main cause of cost, which lists and identifies all the resources that were spent on producing the product during the research period represented by the data of the year (2021), which were extracted from The Financial Affairs Department (Cost Division) in the company, which is shown in the following table:

Table (1) Inventory of total resources heaters lab in homogeneous complexes

Sequence	Resource pool	Statement
1	Direct action complex	Salaries
		Certificate allowances
		Position allowances
		Family allowances
		Professional and technical allowances
		Incentive bonus
		Other allowances
2	Raw materials complex	Insurance for employees
		Raw materials and raw materials
		Fuels and oils
		Backup tools
		Water
		Electricity
		3
Stationery		
Transfer of workers		
4	Equipment complex	Maintenance services
		Maintenance complex
5	Maintenance complex	Maintenance services
6	Compound of the rest of the other service supplies	Rental of assets and equipment
7	Disintegration complex	Destruction of buildings, constructions and roads
		Abandonment of machinery and equipment
		Disappearance of transportation media
		The extinction of numbers and templates
		Furniture and office equipment

Prepared by researchers based on company records.

Second: Determine the cost of each resource group

Table (2) the cost of the resources spent in the heaters factory for the year (2021)

T	Resource Pools	Statement	Amount \ To The Nearest Thousand Dinars	The Total	
1	Direct Complex	Action	salaries	12,02,55,000	16,78,72,000
		Certificate allowances	1,28,53,000		
		Position allowances	5,80,000		
		family allowances	1,25,10,000		
		Professional and technical allowances	53,54,000		
		Incentive bonus	1,95,000		
		Other allowances	1,25,000		
		Insurance for employees	1,60,00,000		
2	raw materials complex	Raw materials and raw materials	89,09,000	89,09,000	
3	energy complex	fuels and oils	2,06,52,000	2,55,78,000	
		backup tools	26,76,000		
		water	10,00,000		
		electricity	12,50,000		
4	equipment complex	Supplies and errands	63,92,000	2,12,06,000	
		stationery	36,44,000		
		Transfer of workers	1,11,70,000		
5	maintenance complex	Maintenance Services	70,20,000	70,20,000	
6	Compound of the rest of the other service supplies	Rental of assets and equipment	1,20,00,000	1,20,00,000	
7	Disintegration complex	Destruction of buildings, constructions and roads	89,36,000	3,69,94,000	
		Abandonment of machinery and equipment	1,99,49,000		
		Disappearance of transportation media	26,49,000		
		The extinction of numbers and templates	8,65,000		
		Furniture and office equipment	45,95,000		
The grand total of costs				27,95,79,000	

Source: Prepared by researchers based on company records (Cost Division).

Third: - Determining the practical capacity for each group of resource groups (hours available to work)

Table (3) Annual working capacity of the main divisions of electric heater production

T	Department Name	Number of workers (1)	Daily working time/min (2) ¹	Number of working days per year	Operational energy/min
				(3) ²	(1) * (2) * (3)=(4)
1	Pressing	3	360/d	264 days	2,85,120
2	Welding	3	360/d	264 days	2,85,120
3	Lathe	3	360/d	264 days	2,85,120
4	Establishments	3	360/d	264 days	1,90,080
5	Plastic + shells	2	360/d	264 days	2,85,120
6	Quality control	3	360/d	264 days	3,80,160
Total annual operating capacity					17,10,720

Source: Prepared by researcher Yen.

1. The daily working time is (6) hours (6 hours * 60 / min = 360 / min).
2. The number of working days in a year is (22 days in a month * 12 months = 264 days).

Fourth: Determining actual energy on the basis of resource consumption

Table (4) Actual capacity of production sections (annual)

T	Department Name	Number of workers (1)	Daily working time/min (2) ¹	Number of working days per year	Operational energy/min
				(3) ²	(1) * (2) * (3)=(4)
1	pressing	3	360/d	264 days	2,85,120
2	welding	3	360/d	264 days	2,85,120
3	lathe	3	360/d	264 days	2,85,120
4	Establishments	2	360/d	264 days	1,90,080
5	Plastic + Shells	3	360/d	264 days	2,85,120
6	quality control	4	360/d	264 days	3,80,160
Total annual operating capacity					17,10,720

Source: Prepared by researcher Yen.

Fifth: Determining the idle capacity of each production department

After determining the share of the production departments from the practical energy and the actual energy, in this step, the volume of idle energy will be calculated, which represents the difference between the practical energy and the actual energy as shown in Table (5) :

Table (5) Determination of idle power \ (min)

T	Section	Practical power	Actual energy	Idle power	Ratio of idle power to Working power
		-1	-2	(2-1) = (3)	
1	Pressing	285120	12408	272712	95%
2	Welding	285120	16104	269016	94%
3	Lathe	285120	21384	263736	92%
4	Foundations and structures	190080	9768	180312	94%
5	Plastic	285120	6072	279048	97%
6	Quality control	380160	11616	368544	96%
7	The total	1710720	77352	1633368	95%

Source: Prepared by researchers based on tables (4, 3)

It is clear from table (5) the importance of the role played by the application of the RCA and TD-ABC systems in terms of showing the idle energy in all production departments and thus reducing the costs that contributed to production, as it is noted from the previous table the large volume of idle energy estimated at a rate of (95%) For all production departments.

Sixth: Distribution of costs to production departments

Table (6) distribution of costs to production department's \ (to the nearest thousand dinars)

The statement	Cost oriented	Production divisions						Total
		Pressing section	Welding department	Turning department	Foundations department	Plastic department	Quality control department	
Salaries and wages	Direct cost	2,82,50,000	2,68,50,000	2,63,50,000	1,86,50,000	2,74,50,000	4,03,22,000	16,78,72,000
Materials and materials	Direct cost	28,51,000	24,95,000	22,27,000	8,91,000	4,45,000	0	89,09,000
Fuels and oils	Fuel consumption	49,56,000	41,30,000	53,70,000	30,98,000	10,33,000	20,65,000	2,06,52,000
Backup tools	Number of machines	10,70,000	5,35,000	5,89,000	2,68,000	80,000	1,34,000	26,76,000
Supplies and errands	The number of production workers	17,25,840	14,70,160	9,58,800	6,39,200	3,19,600	12,78,400	63,92,000
Stationery	Paper usage	7,29,000	0	0	1,82,000	3,64,000	23,69,000	36,44,000
Water	The percentage of consumption by the	4,00,000	70,000	80,000	3,00,000	50,000	1,00,000	10,00,000
Electricity	Machines and the number of employees	2,75,000	3,50,000	2,50,000	1,87,000	63,000	1,25,000	12,50,000
Maintenance services	The number of times of maintenance	24,57,000	17,55,000	13,34,000	7,02,000	4,21,000	3,51,000	70,20,000
Transfer of workers	Number of workers	18,61,000	18,61,000	18,61,000	12,42,000	18,62,000	24,83,000	1,11,70,000
Rental of equipment and assets	Number of rentals	42,00,000	30,00,000	24,00,000	18,00,000	6,00,000	0	1,20,00,000
Collapse of buildings	Space	20,62,000	13,75,000	13,75,000	6,87,000	6,87,000	27,50,000	89,36,000
Machines annihilation	Machine operating hours	59,85,000	49,87,000	69,83,000	9,97,000	0	9,97,000	1,99,49,000
Media extinction	Number of employees	4,42,000	4,42,000	4,41,000	2,94,000	4,41,000	5,89,000	26,49,000
The extinction of numbers and templates	Number of machines	2,60,000	2,15,000	1,73,000	87,000	43,000	87,000	8,65,000
Furniture vanishing	Number of employees	7,66,000	7,66,000	7,66,000	5,11,000	7,65,000	10,21,000	45,95,000
The total		5,82,89,840	5,03,01,160	5,11,57,800	3,05,35,200	3,46,23,600	5,46,71,400	27,95,79,000

Source: Prepared by researcher Yin

Seventh: Calculating the average cost of each section

After allocating the costs in the previous step, this will be done the step is to calculate the average cost for each section as follows: - The average cost of each department = the total costs of the department / the working capacity of the department .As shown in Table (7)

Table (7) Calculation of the average cost for each section

Sequence	Section	The total cost	Working energy per	Average cost of each section
		Dinar	Section/min	Dinars/minute
1	Pressing	5,82,89,840	2,85,120	204
2	Welding	5,03,01,160	2,85,120	176
3	Lathe	5,11,57,800	2,85,120	179
4	Establishments	3,05,35,200	1,90,080	161
5	Plastic and shading	3,46,23,600	2,85,120	121
6	Quality control	5,46,71,400	3,80,160	144
7	The total	27,95,79,000	17,10,720	985

Source: Prepared by researchers based on tables (6, 3)

Eighth: Calculating the actual energy cost

Actual energy cost = Average cost per section * Actual energy per section

Table (8) Calculation of the actual energy cost

T	Section	Average cost per section	Actual power	Actual cost of energy
		1	2	(3) = (1) * (2)
1	Pressing	204	12,408	25,31,232
2	Welding	176	16,104	28,34,304
3	Lathe	179	21,384	38,27,736
4	Establishments	161	9,768	15,72,648
5	Plastic and shading	121	6,072	7,34,712
6	Quality control and management	144	11,616	16,72,704
7	The total	985	77,352	1,31,73,336

Source: Prepared by researchers based on Table (4) (7).

Eighth: Calculating the cost of idle energy

Idle energy cost = average cost per section * idle energy per section

Table (9) Calculating the cost of idle energy

T	Section	Average cost per section	Idle power	The cost of idle energy
		1	2	(3) = (1) * (2)
1	Pressing	204	2,72,712	5,56,33,248
2	Welding	176	2,69,016	4,73,46,816
3	Lathe	179	2,63,736	4,72,08,744
4	Establishments	161	1,80,312	2,90,30,232
5	Plastic and shading	121	2,79,048	3,37,64,808
6	Quality control	144	3,68,544	5,30,70,336
7	The total	985	16,33,368	26,60,54,184

Source: Numbers of researchers according to table (7,5)

COMPARISON BETWEEN THE COSTS OF THE PRODUCT UNDER THE SYSTEM APPLIED IN THE COMPANY AND THE COST UNDER THE EMPLOYMENT OF (TD-RCA):

In order to know the total cost of one heater under the system applied in the company, we will divide the total expenses for the year 2021 on the total production volume, as shown below:

The cost of one heater = total costs / total production

$$279,579,000 / 103 = 2,714,359$$

As for the cost of one heater according to TD-RCA, it is:

$$\text{Cost per heater} = \text{total actual costs based on resources consumed} / \text{total production} = 13,173,336 / 103 = 128,000$$

Table (10) Comparison of product cost under the company system and TD-RCA

Product cost / JD

1	Product cost under company system	2,714,359
2	Product cost under TD-RCA	128,000
3	Reduction amount	2,586,359

Source: Prepared by the researcher

It can be seen from table (10) the big difference between the cost of the heater under the system applied in the company and under the system TD-RCA. The reason for this is that the method applied in the company is based on the total theoretical energy that does not separate between the exploited and the non-exploited energy, as TD-RCA achieved a reduction in cost by (2,586,359) and thus achieving a competitive advantage by offering a product characterized by low cost, Quality, efficiency , and faster time .

CONCLUSIONS

1. Failure systems costs traditional and not Objectivity in Measure costs. From most important the reasons that Led to me Appearance of regular Accounting consumption Resources RCA and costs on me Basis activities directed in time TD-ABC .
2. Employment of resource consumption and cost accounting systems based on time-oriented activities (TD-RCA) helps management to detect waste and waste and how to exploit and continuously improve them
3. Decreased demand for the heater product, as the actual production for the year 2021 reached only 103 heaters, which is a small percentage that constitutes only 17% of the available energy.
4. The application of the TD-RCA system , resulting from the employment of both RCA and TD-ABC , helped in the optimal exploitation of energy and its separation into used and idle

energy and the exclusion of idle costs and not being charged to the product, and this was not provided by the traditional company system, where the actual costs of energy used according to TD- ABC (13,173,336) dinars instead of (279,579,000) calculated according to the traditional company system

5. Contributed Application System TD-RCA in discount Cost the product to (128,000) dinars for the heater the one distance What she was cost the real that incurred The company (2,714,359) dinars in Shade System the company Which It was completed Investigation discount by (2,586,359) dinars in All lonliness Complete its production .

Recommendations

Failure to adopt the information provided by the traditional company system, as it is distorted and inaccurate due to the calculation of idle energy and its loading on the company. The product which leads to the high cost of the product.

1. The need to build a laboratory . research sample . The TD-RCA resource consumption accounting system is environmentally friendly . Modern manufacturing and provides detailed information . For all available energies and product costs, in addition to assisting the administration in determining the idle untapped energy, excluding its cost and not charging it to the product.
2. Paying attention to the marketing aspect of the heater product and conducting market studies to identify the desires of customers as well as looking at competing products to find solutions to promote the product, in addition to opening multiple marketing outlets for the purpose of marketing the product.

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