

# The Role Of Resource Consumption Accounting In Achieving Competitive Advantage- An Applied Study In The General Company For Electrical And Electronic Industries - Generator Assembly Plant

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## Abstract

The success of economic units that work in the field of industry depends on the process of determining costs, allocating and distributing costs because this process helps the unit management in achieving competitive advantage through the provided cost and quantitative information that can be exploited in achieving factors and dimensions of competitive advantage, so the current research focused on clarifying the role of Modern cost-effective techniques represented by the resource consumption accounting technology, where the research aims to identify the nature of resource consumption accounting, the foundations on which it is based, its principles, its theoretical framework, and its role in achieving optimal utilization of resources and reducing costs, the research reached a set of conclusions, the most important of which is that the use of resource consumption accounting technology makes economic units able to achieve the competitive advantage because it achieves the most important factors affecting the success of the cost leadership strategy represented by reducing investment and adopting a distribution policy consistent with the specificity of the product and the optimal utilization of energies.

**Keywords:** Resource consumption accounting, cost reduction, cost segregation, resource utilization, competitive advantage .

## INTRODUCTION

Iraqi industrial units are exposed to many problems that limit their competitiveness, and these problems are represented in the waste of available resources, the inability to exploit idle energies and the low quality of products compared to Arab and foreign competing products. All these challenges made the Iraqi economic units seek to adopt modern production techniques and methods in line With the modern business environment that is characterized by acceleration, competition, technological progress, preservation of the environment and no waste of natural resources, so that it can keep pace with this progress in the field of industry and business and face challenges to ensure its survival and continuity, as well as meet the community's needs of goods and services that take into account the environmental aspects and the consumer's ability to spend, Among these techniques is Resource Consumption Accounting, which is a comprehensive method of managerial accounting as

it allows integration with other methods and systems for cost management that are often applied individually. This technique also avoids defects and criticisms directed at traditional cost systems. resources were served in the measurement and management of energy, in defining resource pools, linking specific resources with activities, and achieving optimal utilization of resources based on the quantitative measurement of what is being consumed of resources, thus reducing costs. Based on the foregoing and to achieve the objectives of the research, it was divided into four sections. The first topic included the research methodology and the second topic focused on the theoretical side of the resource consumption accounting technique and its role in achieving competitive advantage, while the third topic included the practical side, and the fourth topic presented the most important conclusions and recommendations obtained by the research.

## The first topic

## Research Methodology

### 1-1- Research problem

Many challenges have emerged that economic units face at the present time, and that the most important of them is intense competition in various fields, and the openness of global markets to each other facilitated the process of movement of products between countries, which made Iraqi local products at risk as a result of the quality and low cost of imported products. In addition to the difficulty of obtaining raw materials due to the circumstances and events that have passed through Iraq from 2003 to the present day, so it was necessary for it to adopt modern systems and techniques in line with these challenges because the accounting literature indicates that the traditional method of managerial accounting and cost accounting have been subjected to many criticisms due to their shortcomings. In providing the administration with the necessary information to rationalize the decisions that support the competitive position, and based on the foregoing, the problem of the study lies in answering the following question:

((Is there a role for resource consumption accounting in achieving competitive advantage in Iraqi industries?))

### 1-2- Research objectives

The main objective of the research is to show the impact of the use of resource consumption accounting and its role in achieving competitive advantage in industrial economic units through:

1- Identifying the nature of resource consumption accounting, the foundations on which it is based, its principles, its theoretical framework, and its role in achieving optimal utilization of resources and reducing costs.

2- Presenting a set of recommendations that can benefit the administrative leaders in the Iraqi economic units, the concerned ministries, the relevant authorities and those interested in this field in how to make the best use of resources and achieve a competitive advantage.

### 1-3- The importance of research

The application of the resource consumption accounting technology in the Iraqi industrial units achieves the optimum utilization of resources, reducing costs and providing high quality products, thus getting rid of the most important challenges faced by the Iraqi industrial units.

### 1-4- Research hypothesis

The application of resource consumption accounting leads to optimal utilization of resources and cost

reduction, which leads to the achievement of a competitive cost leadership strategy.

### 1-5- Spatial and temporal limits of research

1- Spatial boundaries: Baghdad Governorate, Al-Waziriyah, the General Company for Electrical Industries.

2- Time limits for research: The data and information contained in the statements, records and lists approved by the General Company for Electrical Industries for the year 2021 were relied upon.

## The second topic

### resource consumption accounting technology

2-1- The origin and concept of resource consumption accounting: The changes and developments brought by technology to the production environment, clearly showed the shortcomings in the traditional cost-calculation methods that have been used since the eighties. Resource Depreciation (RCA) as an approach to management accounting in 2000, later developed in the International Advanced Manufacturing Association (CAM-I) in December 2001, and the International Federation of Accountants (IFAC) in 2009 including Resource Depreciation Accounting (RCA) in its Good Practice Guide to Management Cost in its report (Cost Journey Assessment: Continuous Maturity Model of Cost Levels), RCA combines the German cost management method (GPK) and the activity-based costing (ABC) method. It combines the advantages of previous systems to create a comprehensive and integrated management accounting technology for cost management 2020:12327), (Kadhim & Abdulzahra. The resource consumption accounting system is one of the tools that help economic units to succeed through their ability to allocate available resources more efficiently and achieve Greater power in allocating costs to activities, and resource consumption accounting (RCA) is one of the modern cost tools or systems, and it is characterized by providing comprehensive and sufficient information that helps in proper planning of resources, reducing costs, controlling and discovering idle or surplus energies, and helps to take strict strategic and operational decisions. , which increases the competitiveness of the unit and provides the best ways to satisfy customers, this tool can provide what traditional systems cannot provide if it is applied correctly (Al-Rawi & Abd al-Hafiz, 2018: 28).

### 2-2- Objectives of resource consumption accounting

The main objective of resource consumption accounting is to optimize the use of available resources within the

economic unit, which leads to achieving the lowest possible cost of the product, adding value to the customer and supporting the competitive position of the economic unit. In addition to the main objectives, resource consumption accounting aims to achieve the following sub-objectives:

- Work to provide the economic unit with reliable and appropriate information, as this technology mainly focuses on distinguishing between owning and consuming resources, as well as identifying idle energy to reduce costs, increase profits and support the competitive position (Kadhim & Abdulzahra, 2020: 12327).
- Improving the traditional activity-based costing method, to enhance the cost management of the strategic system and use resources as a main objective, this not only improves the accuracy of cost allocation, but also provides information on management's responsibility for performance appraisal (Alkhafaji & et al, 2020: 592).

### 2-3- The importance of accounting for resource consumption

In today's competitive market environment, economic units can outperform their competitors, preserve their assets, respond faster to customer requirements and expectations, or at least improve their positions by focusing on management activities, and here the role of management accounting emerges through its significant contribution to proposing cost methods. In order to achieve its strategic objectives, alternative cost methods have replaced the traditional cost methods because they could not keep pace with developments, and as a result began to pay attention to accounting for resource consumption, which we can consider as a new generation of contemporary costing methods (VARGÜN&KILINÇASLAN,2020:639)).

Consumption of resources in the following points:

- RCA provides a resource-based perspective that allows for accurate control of the consumption, structures and costs of these resources. Furthermore, the system examines idle capacity and uses replacement costs instead of historical costs. Additionally, it captures cost data at different levels (Jassem, 2019: 176).
- RCA integrates effectively and simply with modern information systems that support project operations, and takes advantage of these systems to track and collect more details (Al-Hebry & Al-Matari, 2017: 106).

### 2-4- Use depreciation accounting to achieve a competitive cost leadership strategy

A cost leadership strategy is an effort by an economic unit to generate a competitive advantage by achieving the lowest cost in the industry, the focus of economic units

implementing cost leadership strategies is on strict cost control, refraining from all activities that incur significant costs, and prioritizing efficiency in each process, thus the goal of cost leadership strategy can be achieved (Yusuf et al, 2020:292). Hary & Mboma (2020: 138) defined the cost leadership strategy as a mechanism to create a competitive advantage by obtaining the lowest operating cost in the industry compared to competitors, especially in the market where price is an important factor without compromising the quality of the product. The cost leadership strategy generates revenue for the economic unit Above average in the industry as a result of providing products at a lower price than competitors' products, which leads to increased sales and more revenue, as it gives them a defense against competitors (Kauts, 2015:11). 2013, 280):

- Reducing investment in resources, especially in raw materials, while providing advanced storage systems.
- Relying on a distribution policy that is consistent with the specificity of the products and to protect it from damage or obsolescence.
- Optimizing the energies available in the resources of the economic unit to reduce the impact of fixed costs on a single unit of production.

From the above, it is clear that the cost leadership strategy requires the economic unit to reduce product costs without compromising the characteristics of the product or reducing quality, because reducing the quality of the product will expose the unit to many problems, perhaps the most prominent of which is the customer's dissatisfaction even if the price of the product is lower than the competitors, and here the unit should It adopts a technology or method that makes it able to reduce costs without compromising the quality of the product and this is in line with the resource consumption accounting technology, because the factors affecting the cost leadership strategy provided by RCA technology by providing a resource-based perspective that allows accurate control of the consumption, structures and costs of these resources as well as It uses replacement costs instead of historical costs, in addition, it monitors cost data at different levels and this achieves the first factor, and RCA is an accounting tool for cost management that provides appropriate information on how to optimally utilize the available resources and employ idle and surplus energy as well as the division of costs that It has been limited in resource pools to relative and fixed costs, and the reason for dividing costs into fixed and proportional is a The fixed costs depend on the theoretical capacity and the relative costs are allocated according to the amount of the outputs of the pool of

resources and this achieves the third factor, and thus accounting for resource consumption contributes to increasing productivity, reducing the cost of the product, increasing the profits of the unit and supporting its competitive position without compromising the quality of the product.

### The third topic

#### Application of resource consumption accounting in the generator assembly plant

This topic deals with an introductory overview of the research community and sample, as well as the practical steps for accounting for resource consumption, which are summarized by a set of points, as it was relied on the laboratory data installed in the records for the year (2021):

The first axis: an introduction to the General Company for Electrical and Electronic Industries

The company was established in accordance with the decision of the Council of the Economic Corporation canceled and adopted in the session No. 45 on 17/8/1965 as a result of the technical cooperation agreement between the former Soviet Union and Iraq, and accordingly the company was established under the name ((General Company for Electrical Appliances and Equipment)) and it was published in the Iraqi Gazette in the issue 367 on 2/2/1967, and the project was started in 1963 on a land area of (108000) square meters, and the company was officially opened on 4/18/1967.

After the company became affiliated with the Ministry of Industries in 1987, the name of the company was

The second axis: the steps of applying resource consumption accounting

3-1- Inventory and determine the available resources that have been spent on the product

The first step in the application of resource consumption accounting is to inventory and determine the resources were consumed during this period:

changed to the General Company for Electrical Industries and this came as a result of canceling public institutions and merging them within the ministry, after that, the ownership of the company was transferred to the Military Industrialization Organization in the year (1987) and at the beginning of the year (1993) the lamp factory was separated from the company and a directorate was created in the name of the lamp factory in the Taji area, which is linked to the Military Industrialization Authority.

On October 20, 1993, the company separated from the Military Industrialization Organization and joined the Ministry of Industry and Minerals. The lamps factory was restored to the company, which is now considered one of its affiliated factories. In 1997, the company's founding contract was approved according to the General Companies Law under the name (( The General Company for Electrical Industries) with a capital of (285 000,000) dinars and registered according to the provisions of Article (6) of the General Companies Law No. 22 of 1997.

In the year (2016) and based on Cabinet Resolution No. (260) for the year (2015) and in accordance with the provisions of Article (31) of the Public Companies Law 22 of 1977, the General Company for Electrical Industries and Al-Ezz General Company were merged with a capital of (4249337252) dinars, and the number of Its employees are (2637) employees and (1080) employees in the form of a contract, and the company's sites are distributed between the ministerial and the crowns, where good quality and documented infrastructure is available.

that were spent on the production process during the year (2021), which were obtained from the Cost and Financial Department of the General Company for Electrical Industries. The following table shows the cost of the resources that

Table (1) costs incurred in the generator assembly plant during the year 2021

No.	Statement	Amount / dinars
1	salaries and wages	495480000
2	Raw materials and raw materials	3633665000
3	backup tools	6322000
4	Extinction	46453000

5	Water	3650000
6	Electricity	7350000
7	Fuel	17530000
8	Oils and greases	5230000
9	Packing and warping material	930000
10	Staff equipment	2620000
11	Maintenance Services	5340000
12	Hospitality	4850000
13	Advertising	3525000
14	Dispatch	16135000
15	Telecom	1745000
16	Miscellaneous service expenses	2013000
17	Stationery	4550000
18	transportation expenses	6345000
the total		4263733000

Source: Prepared by researchers based on company records

### 3-2- Identifying resource pools

In this step, according to the resource consumption accounting technique, the resources that were spent by the factory are grouped together within the cost pools

based on the common aspects of these resources (technology, skills, homogeneity), and Table No. (2) shows these pools

Statement Table No. (2) inventory and identification of plant resources in appropriate complexes

cost type	No.	supplier complex	Resources	Cost / dinar	the total
major costs	1	Direct Materials Complex	direct material	3633665000	3633665000
	2	Direct Action Complex	direct wages	288000000	288000000
Minor costs	1	Indirect Action Complex	Salaries and indirect wages	207480000	207480000
	2	Indirect material complex	Oils and grease	5230000	6160000
			Packing and warping material	930000	
	3	motor power complex	fading away	46453000	81305000
			Water	3650000	
			Electricity	7350000	
			Fuel	17530000	
			backup tools	6322000	
	4	equipment complex	Staff equipment	2620000	7170000
			Stationery	4550000	
	5	Maintenance Service Complex	Maintenance of machinery and equipment	3675000	5340000
			Maintenance of office furniture and equipment	1665000	

6	Advertising Complex	publicity and announcement	3525000	8375000
		Hospitality	4850000	
7	Dispatch and communications complex	dispatch	16135000	17880000
		Telecom	1745000	
8	Maintenance Service Complex	Miscellaneous serv expenses	2013000	8358000
		transportation expenses	6345000	
the total				4263733000

Source: Numbers of researchers based on data in Table No. (1) and company records

### 3-3- Identify and separate costs in resource pools

In this step, the costs that were counted in the resource pools are divided into fixed and proportional costs, and Table No. (4) shows how to separate the costs

Table No. (4) Separation of costs

resource pool	Resources	fixed costs	Proportional costs	Total
Indirect Action Complex Indirect material complex motor power complex	Administration staff salaries	66600000	-	207480000
	Salaries of workers in production services	52830000	88050000	
	the total	119430000	88050000	
equipment complex Maintenance Services Complex Advertising Complex	Oils and greases	3050833	2179167	6160000
	Packing and warping material	-	930000	
	the total	3050833	3109167	
Dispatch and Communication Complex resource pool Indirect Action Complex Indirect material complex motor power complex	fading away	39504000	6949000	81305000
	Water	3650000	-	
	Electricity	4594000	2756000	
	Fuel	-	17530000	
	backup tools	3688000	2634000	
the total	51436000	29869000		
equipment complex Maintenance Services Complex Advertising Complex	Staff equipment	982500	1637500	7170000
	Stationery	4550000	-	
	the total	5532500	1637500	
Dispatch and Communication Complex resource pool	Maintenance of machine and equipment	1346000	2329000	5340000
	Furniture and office equipment maintenance	1665000	-	
	the total	3011000	2329000	
Indirect Action Complex Indirect material complex motor power complex	publicity and announcement	3525000	-	8375000
	Hospitality	4850000	-	

	<b>the total</b>	<b>8375000</b>	-	
<b>equipment complex Maintenance Services Complex Advertising Complex</b>	<b>Resources</b>	<b>16135000</b>	-	<b>17880000</b>
	<b>Administration staff salaries</b>	<b>1745000</b>	-	
	<b>Salaries of workers in production services</b>	<b>17880000</b>	-	
<b>Dispatch and Communication Complex</b>	<b>the total</b>	<b>2013000</b>	-	<b>8358000</b>
	<b>Oils and greases</b>	<b>6345000</b>	-	
	<b>Packing and warping material</b>	<b>8358000</b>	-	
	<b>the total</b>	<b>217073333</b>	<b>124994667</b>	<b>342068000</b>

Source / numbers of researchers based on company records and table No. (2)

The principles that were adopted in the process of separating costs into fixed and proportional were as follows:

- The generator assembly plant contains 48 workers, according to the statistics of the cost department for the year 2021, distributed between administration, production and services, where the number of workers in the production process reached 30 workers and the administration is 5 employees, whose salaries are (66,600,000) and services are 13 workers, whose wages amount to (140,880,000).

- The factory works at a rate of 7 hours per day for 5 days per week, and since the number of weeks in the year is 52 weeks, then the working hours in the year amount to 1820 hours (5 days \* 52 weeks \* 7 hours), while the working hours.

- Machines operating hours (1560 hours) and planned (2548 hours).

- The actual volume of production (20000 KVA) and the planned (48000 KVA).

- Maintenance hours during the year (206 hours) and the planned maintenance hours (325 hours)

After the plant's resources have been divided into complexes and the cost and resources of each complex have been shown, the laboratory can study the reduction

of investment in resources by knowing the impact of each complex on the production process, such as the amount of resources consumed by the product from the complex and the amount of surplus or unemployed and its exclusion, and this achieves one of the factors affecting the leadership's strategy A cost that provides for reduced investment in resources. Table No. (5) shows the exploited and unutilized costs:

Table No. (5) Analysis of percentages of variable and fixed costs

Source / prepared by the researchers based on the data of Table No. (4)

It was relied on the basis of actual and planned production in dividing the fixed costs into exploited and untapped, where the actual production of the plant was (20000 KVA) and the planned production (48000 KVA), and the following equation shows this: Exploited fixed costs = fixed costs for each complex × 20000 ÷ 48000.

3-4- Determining the cost causes and rates of the resource pools After inventorying the plant resources, defining their pools, separating costs and determining the percentages of variable and fixed costs that are exploited and unexploited, it is necessary to determine the cost causes for each resource pool and Table No. (6) explains these causes:

Table No. (6) Causes of Cost for Complexes

No.	resource pool	Cost cause
1	Indirect Action Complex	Direct working hours
2	Indirect material complex	direct material
3	motor power complex	Machine operating hours

4	equipment complex	Number of employees
5	Maintenance Services Complex	maintenance hours
6	Advertising Complex	Number of units produced
7	Dispatch and Communication Complex	Number of employees
8	Miscellaneous Expenses Complex	Number of employees

Source / prepared by researchers based on lab data

3-5- Determining the pools' resources consumed by the activities and allocating the costs to them:

This step goes through two stages, as follows:

3-5-1- Determining the consumed resources:

At this stage, the consumed resources are determined based on the practical energy that was challenged in the previous step (the fifth step) and they are distributed on different bases according to the type of activity and table No. (26) shows this:

Table No. (7) Determining the resources of the complexes consumed by the activities

<b>Aggregate activity</b>	<b>Outpour</b>	<b>mainten ance</b>	<b>driving forces</b>	<b>Qualit y</b>	<b>Administrati ve</b>	<b>Total</b>
<b>indirect action</b>	<b>5460</b>	<b>7280</b>	<b>7280</b>	<b>3640</b>	<b>9100</b>	<b>32760</b>
<b>indirect material</b>	<b>14600</b>	<b>3200</b>	<b>2200</b>	-	-	<b>20000</b>
<b>motive forces</b>	-	-	<b>7800</b>	-	-	<b>7800</b>
<b>Fittings</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>7</b>	<b>17</b>	<b>60</b>
<b>Maintenan ce Services</b>	-	<b>206</b>	-	-	-	<b>206</b>

Source / prepared by researchers based on lab data and tables (2), (4) and (6)

The above table shows the amount of resources consumed from the resource pools for the activities carried out by the plant, depending on the practical energy of each pool.

3-5-2- Distribution of the costs of the consumed resources from the complexes to the activities:

At this stage, the costs of the resources that were expended from the complexes on the activities of the

plant, which were identified in the previous stage, are calculated, and then these costs are distributed to each activity according to the size of the benefit of each activity from these resources and according to the following equation:

$$\text{Activity cost} = \text{activity's share of resources} \times \text{aggregate rate (fixed cost rate + variable cost rate)}$$

Table No. (8) Distribution of the costs of the consumed resources from the complexes to the Activities



resource pool	fixed costs		Total fixed costs	Variable costs	Total exploited costs	Total costs
	exploited costs	untapped cost				
direct action	-	-	-	28800000	28800000	28800000
direct material	0	0	0	0	0	0
indirect action	-	-	-	36336650	36336650	3633665000
indirect material	4976250	69667500	119430000	88050000	13781250	207480000
	0	0	0	0	0	0
motive forces	1271180	1779653	3050833	3109167	4380347	6160000
Fittings	2143200	30004000	51436000	29869000	51301000	81305000
	0	0	0	0	0	0
Maintenance Services	2305000	3227500	5532500	1637500	3942500	7170000
publicity and announcement	1255000	1756000	3011000	2329000	3584000	5340000
Dispatch and Communication	3489584	4885416	8375000	-	3489584	8375000
Miscellaneous expenses	7450000	10430000	17880000	-	7450000	17880000
the total	3482500	4875500	8358000	-	3482500	8358000
Ratio to total costs	9044776	12662556	217073333	40466596	41371074	4263733000
	4	9		67	31	
resource pool	% 2.2	% 2.9	%5.1	% 94.9	% 97	%100

Table

No. (8)

Distribution of the costs of the consumed resources from the complexes to the activities

Resource Pools	distribution basis	Production activity	Maintenance activity	Motive force activity	Quality Activity	Administrative activity	The total
direct costs							
direct action	Direct	288000000	-	-	-	-	288000000
direct material	Direct	363366500	-	-	-	-	363366500
Total direct costs		392166500	-	-	-	-	392166500
		0					0
Indirect costs							
indirect action	work hours	19858020	2647736	26477360	1323868	3309670	119148120
			0		0	0	

indirect material	KVA	2657200	582400	400400	-	-	3640000
driving forces	Machine working hours	-	-	42985800	-	-	42985800
Fittings	Number of Workers	513010	666913	666913	359107	872117	3078060
Maintenance Services	maintenanc e hours	-	3124608	-	-	-	3124608
publicity and announcement	Direct	-	-	-	-	3489584	3489584
Dispatch and Communication	Direct	-	-	-	-	7450000	7450000
Miscellaneous expenses	Direct	-	-	-	-	3482500	3482500
Total indirect costs	-	23028230	3085128 1	70530473	1359778 7	4839090 1	186398672
Total costs	-	394469323 0	3085128 1	70530473	1359778 7	4839090 1	410806367 2

Source / prepared by the researchers based on the data in

Table (7) Through the previous steps, which focused on

Resource Pools	incurred costs	distributed costs	idle energy costs
<b>direct costs</b>			
<b>direct action</b>	288000000	288000000	-
<b>direct material</b>	363366500	363366500	-
<b>Total direct costs</b>	392166500	392166500	-
<b>Indirect costs</b>			
<b>indirect action</b>	207480000	119148120	88331880
<b>indirect material</b>	6160000	3640000	2520000
<b>driving forces</b>	81305000	42985800	38319200
<b>Fittings</b>	7170000	3078060	4091940
<b>Maintenance Services</b>	5340000	3124608	2215392
<b>publicity and announcement</b>	8375000	3489584	4885416
<b>Dispatch and Communication</b>	17880000	7450000	10430000
<b>Miscellaneous expenses</b>	8358000	3482500	4875500
<b>Total indirect costs</b>	342068000	185158877	155669328
<b>Total costs</b>	426373300	4108063672	155669328

separating the indirect costs into fixed and proportional costs, as well as extracting the exploited part of the fixed costs after separating them, and this is in the fourth step, the fifth step also helped to extract the rates for the fixed and exploited costs, while the sixth step focused on determining the resources that were spent on the activities by the pools and then calculating the costs of these resources that were spent on the activities and their distribution, through what was presented by the previous

steps, a comparison can be made between the realized costs and the distributed costs to determine the idle energy costs because the steps allowed the researcher to exclude costs that do not add value to the product and the following table illustrates this.

Table No. (9) idle energy costs under resource consumption accounting Source / prepared by the researchers based on the data of tables (2), (3) and (8).

Table No. (9) shows one of the strengths of the resource consumption accounting system. The table displays idle energy costs as a result of comparing the realized costs and the distributed costs, which are presented in Tables No. (2), (3) and (8), as these costs were charged to the cost of The product directly, which increases its selling price, which makes the factory unable to compete as a result of the low prices offered by the private sector, and thus the factory has idle energy that can be exploited in other aspects that allow it to compete, thus, this achieved technology is one of the factors affecting the achievement of the

cost leadership strategy, which provides for the optimal utilization of the available energies in the laboratory.

3-6- Distribution of costs of activities to products

In this step, the costs of the activities that were extracted in the previous step (step 6) are distributed to the products, where the costs of each activity are distributed to the products based on the loading rates that were extracted to facilitate the process of distributing costs, and Table No. (10) illustrates this.

Table No. (10) activity load rates

Activity	Costs	activity prompt	Unit	the average
Production	3944693230	Planned production volume	48000 KVA	82,181 dinars/ KVA

Maintenance	30851281	maintenance hours	206 hours	149763.5 dinars/hour
driving forces	70530473	Machine working hours	7800 hours	9042.3 dinars / hour
the quality	13597787	The number of times the examination	88 times	154520 dinars/time
administrative	48390901	Planned production volume	48000 KVA	1008 dinars / KVA

After completing the process of distributing the costs of activities to products, a table can be prepared showing the total cost of each product according to the resource consumption accounting system, and table No. (11) shows this

Table No. (11) of the total costs distributed over the products

Activity the product	output	maintenance	motive forces	the quality	administrative	Product cost
1000 kv . generator set	1479258000	10797948	24685479	2163280	18144000	1535048707
500 kv . series generator	1232715000	11569230	26448728	4635600	15120000	1290488588
250 kv . generator set	1232715000	8491591	19395734	6798880	15120000	1282521205
<b>the total</b>	<b>3944693230</b>	<b>30851281</b>	<b>70530473</b>	<b>13597787</b>	<b>48390901</b>	<b>4108063672</b>

Source / prepared by the researchers based on the data in Table (8)

The above table displays the total cost for each category of products, which have been distributed on appropriate bases commensurate with each activity. Therefore, through the above table, the cost of each product can be reached by dividing the total cost by the number of units

produced in each category. Table No. (12) shows the cost of one unit .

Source / prepared by the researchers based on the data of Table No. (8)

Table No. (12) cost per unit

the product	the total cost	Number of units produced	cost per un
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1000 KVA generator	1535048707	7	219292672
500 KVA generator	1290488588	15	86032572
250 KVA generator	1282521205	22	58296418

Source / prepared by researchers based on lab data and table (11)

Table No. (13) a comparison between the company's cost system and the resource consumption accounting system in terms of costs

Products	The company's traditional costing system			resource consumption accounting system			the difference
	total cost	number of units	unit cost	total cost	number of units	unit cost	
1000 KVA generator	1607193000	7	229599000	1535048707	7	219292672	10306328 discount
500 KVA generator	1386555000	15	92437000	1290488588	15	86032572	6404428 discount
250 KVA generator	1269840000	22	57720000	1282521205	22	58296418	576418 increase
the total	4263632600			4108063672			

Source / prepared by researchers based on lab data and tables (11) and (12)

It is noted from the table that there are differences in cost between the two systems, with the increase and decrease achieved by the RCA system for each category of products, as the amount of cost reduced by the RCA system for the 1000 KVA category was (10306328 dinars) per unit, and since the number of units produced in this category (7 units), the total amount of reduction for this category becomes (72,144296 dinars), while the amount of reduction for the 500 KVA category was (6404428 dinars) per unit, and since the number of units produced in this category is (15 units), the total reduction amount for this category becomes (96066420 dinars), and for the category of 250 KVA, we note that there is an increase in costs by (576418 dinars) per unit, and since the number of units produced in this category is (22 unit) becomes the amount of the total increase for this category (12681196 dinars), and therefore it is possible to reach the amount of reduction or total

increase in costs and for all categories by comparing the total increase for all categories that received an increase in costs and the total reduction for all categories that received a reduction in costs and on as follows:

$$\begin{aligned} \text{Total amount of increase or decrease} &= (72144296 + 96066420) \text{ decrease} - 12681196 \text{ increase} \\ &= 155529520 \text{ Cost Reduction} \end{aligned}$$

Based on the results shown by the resource consumption accounting system, it can be said that the first research hypothesis is accepted, which states (the application of resource consumption accounting leads to achieving optimal exploitation of resources and reducing costs, which leads to the achievement of a competitive cost leadership strategy), where we note that the factors affecting the achievement of a leadership strategy The cost has been achieved during the application steps. The plant has achieved the optimum utilization of resources by dividing the resources into pools and determining the

idle energies which amounted to (155669328) dinars in Table No. (9) and excluding them. The impact of fixed costs on products has also been reduced by separating fixed costs into exploited and unexploited. Exploited in the fourth step Table No. (5) and thus we reach the conclusion that the RCA system reduces the total costs of the plant, which provides an opportunity to compete by reducing prices or using surplus costs in another field, such as converting products to green environment-friendly.

### The fourth topic

## CONCLUSIONS AND RECOMMENDATIONS

### 4-1- Conclusions

1- The large number of criticisms directed at traditional costing systems was the reason for the emergence of the resource consumption accounting technique that combines the advantages of the activity-based costing system (ABC) and the German cost management system (GPK).

2- The use of resource consumption accounting technology makes economic units able to achieve the competitive advantage because it achieves the most important factors affecting the success of the cost leadership strategy represented in reducing investment and adopting a distribution policy consistent with the specificity of the product and optimal utilization of energies.

### 4-2- Recommendations

1- Working on the adoption of the resource consumption accounting technology as a cost system in the General Company for Electrical and Electronic Industries with the aim of eliminating weaknesses in the traditional systems represented in the lack of accurate measurement of costs.

2- Conducting training courses for accountants on how to apply the accounting technology for resource consumption and conducting studies on the problems that prevent its application and finding appropriate solutions to them.

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