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The effect of applying the four stage activity based costing system in achieving cost management: Applied study

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Abstract--The current study focuses on the development of activity-based cost technology after it was in two stages to expand and become more practical and in four stages, where multiple vectors are used to link the cost from the highest level in the economic unit to the lowest level, thus contributing to obtaining detailed cost information at each stage Which leads to understanding and analyzing activities and allocating costs more accurately by tracking the cost across departments, functions and activities to reach the final cost goal, and the information that can be obtained about the cost of the product if the cost is applied on the basis of the four-stage activity can be more reliable and relevant It is important to make various administrative decisions that are commensurate with the modern business environment that requires accurate and detailed information that contributes to achieving competitive positions for the economic unit, in addition to contributing to providing information in the areas of cost and administrative accounting that shows the best methods and means that help economic units to achieve their objectives in cost management and achieving competitive advantages. The cost based on the four-stage activities 4ABC is considered one of the new and complementary technologies for the technologies in Cost and management accounting, and from the foregoing, the problem can be formulated by the following question (Does the application of the cost system on the basis of four-stage activities contribute to providing appropriate information and achieving the objectives of cost management), and the research aims through the application of this system to help the economic unit to provide a detailed database on

resources The research is based on the hypothesis that the application of the activity-based costing system contributes to achieving optimal management of costs in order to reduce them, so this research will be exposed to the theoretical framework of this system with a statement of development The historical system has gone through stages, starting with the traditional system and then becoming time-oriented and then based on performance, reaching the fourth generation, and it became more detailed and in the form of stages for allocating costs. The emergence of the next generation of it, and in this research, all of what was previously mentioned and its application will be reviewed in the General Company for the Battery Industry, which was founded in Pursuant to Law No. (91) of 1969, and in 1975, the battery factory was established after merging the General Company for the manufacture of dry batteries and the General Company for the manufacture of liquid batteries, and on 8/10/2015 it was merged with (the General Company for the Automotive Industry and the General Company for Mechanical Industries) under the name of the company The General Automotive and Equipment Industry, which is one of the companies affiliated to the Iraqi Ministry of Industry and Minerals (Al-Waqa'i Al-Iraqi newspaper, Issue 4424, 2016). and to become one of the leading industrial companies in its field of work. Currently, the company includes a number of laboratories, namely (Al Noor Factory - Lead Foundry Factory - Babylon I and II factories).

Keywords---employing value, engineering, costing.

Introduction

The continuous developments in the contemporary business environment and the intense competition that the economic unit is exposed to and the great technological development as well as the globalization that made the market a small village so that any event in any location can affect the markets in general in addition to the multiplicity of products and the accompanying decline In prices and everything mentioned, the traditional systems such as orders and stages have become unable to meet the challenges faced by the economic units, and after the shortcomings of the traditional systems were revealed, it became necessary for the units to adopt techniques commensurate with those challenges in terms of allocating and measuring costs in a more accurate and fair manner, including the activity-based costing system (ABC), and economic units seek to achieve competitive advantages and reduce their costs by keeping pace with developments in the use of contemporary technologies to help them allocate and measure costs in a more accurate and better manner, which contributes to pricing products in a manner commensurate with the desires of customers and thus increasing the market share and raising the level of profits, which are indicators of achieving economic unity. Competitiveness and uniqueness in the market

Method

The use of the ABC system contributes to the elimination of cost distortions that can occur in the allocation of costs in the traditional systems, in addition to providing detailed and more accurate cost information. In the traditional systems, using an appropriate cost engine for each activity, later known as the Activity-Based Costing (ABC) system (Kowsari, 2013: 2498), as it was defined as a two-stage costing technique where costs are allocated to products on the basis of the activities that require them and contributes to setting costs. products more accurately than traditional methods (Garrison & Others, 2019: 166). The first generation of this system was allocating costs in two stages, the first from resources to activities and the second from activities to the cost target (product or service) and during a certain period of time it became the leading system in measuring and allocating costs and analyzing profitability, but it is considered difficult to apply and very expensive. ((Hilton & Platt, 2020: 172) Due to the shortcomings of this system in the first generation ABC, it developed into the second generation TD-ABC. In 2004 Kaplan & Anderson introduced a new system that addressed the weaknesses that faced the previous generation, which was represented by the costing system based on Time-directed activity (TD-ABC) and time was adopted to be the main vector of cost, so it became easy to implement (729Tuong&others,2020:) This generation was defined by (Blocher & Others) as a system for allocating resource costs directly to the cost target using cost per unit A timeframe of supplying the resource, instead of allocating costs to activities first and then from activities to the cost target (Blocher & Others, 2019: 158), and because technological developments continue and affect the approved systems, it has become necessary to use systems commensurate with those changes to ensure the survival of the economic unit, and because of that Several defects appeared that contributed to the development of the system to the third generation, the most important of which was providing data on the cost of the product and neglecting data related to performance to help the administration in controlling, and thus the third generation of this system appeared, which is PF-ABC to address the shortcomings that plagued the previous two generations. The proposals for this system appeared at the beginning of the year (2009) by (Mohammed Namazi) to combine the advantages of the previous two generations of the system in a hybrid system, which is the costing system based on activity-based performance (Kuhait & Megabal, 2020: 4085) and this generation was known before (Abboud and Shaker) as a hybrid method that attempts to overcome the criticism directed at previous generations of the system. It calculates the actual cost of each activity separately, using an appropriate cost engine and depends on several cost drivers, and this is what distinguishes it from previous generations. It also helps management in making decisions to evaluate and improve performance through information. Provided by determining the deviations for each activity (Abboud and Shaker, 2020: 69), the new propositions are considered a mixture between the two previous generations, and provide a more effective causal relationship with the cost objective, as this system is based on determining the actual costs of each activity separately and with greater accuracy and gives indications for management Regarding production capacity and its exploitation and deviations in prices and volume, as for the fourth generation of the system, it has overcome the defects that plagued previous generations with the addition of new features to suit the challenges of the current

environment. An economy looking for any modernization of the system to ensure its survival in the market and achieve competitive advantages by reducing costs and raising the quality of the product or service provided to the customer, in addition to helping it and facing major challenges and in cost management.

Discussion

1. The inability of traditional cost systems to achieve the objectives of the economic unit and manage its costs, in a way that is reflected in the possibility of achieving efficiency and justice in measurement and allocation, as well as providing data that lacks accuracy and objectivity, which will negatively affect management decisions.
2. The 4ABC system effectively contributed to overcoming the shortcomings that plagued the traditional systems with regard to allocation, distribution and measurement in order to achieve justice and objectivity in measurement and allocation.
3. The resources involved in the production process are the basis for the work of the 4ABC system, and the system plays the role of a watchdog over those resources to show the places of waste and loss, which enables the administration to achieve efficiency in the exploitation of its resources, through what it provides of detailed information that is more accurate and characterized by objectivity.
4. The battery factory, the research sample, suffers from a significant decrease in the level of production, as well as from a significant weakness and absence of the role of the marketing department, as well as a rise in production costs compared to competing products.
5. The factory suffers from a significant weakness in innovation, development and creativity, as a result of the weak interest in developing human resources, as no employee was involved in any development courses in 2021.
6. The cost of the battery based on the cost system applied in the research sample amounted to (422920) dinars, while its cost based on the 4ABC system amounted to (397,635) dinars, and therefore the amount of reduction in the cost amounted to (25285) dinars.

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