

## The extent of using managerial accounting innovations in the government sector in Iraq

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### ABSTRACT

The study aims to show the extent to which the government sector in Iraq uses managerial accounting innovations, the most important of which being VCA - Value Chain Analysis, TDABC – Time-Driven Activity-Based Costing Method, BM – Benchmarking Method, TC - Target Cost Method, SWOT – Strategic Analysis Method, while indicating factors that hinder their application. As the application of these methods leads to the development of accounting information systems in a manner that ensures rationalization of costs and strengthening control over them, and the provision of appropriate information that contributes to rationalizing the correct administrative decisions, a questionnaire was prepared for this purpose and distributed to 500 account and production managers in governmental sectors in Iraq as well as the industrial, agricultural and service sectors. The study found that the government sector in Iraq applies some of these methods, but in a limited manner, as a result of constraints that limit the use of these methods

**Keywords:** Managerial Accounting, Value Chain Analysis, Time-Driven Activity-Based Costing Method, Benchmarking Method, Target Cost Method, Strategic Analysis Method

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## 1. Introduction

The recent developments in the industrial and administrative environment have led to the inability of the recognized Managerial accounting methods to fulfill the requirements and needs of strategic management of information that contribute to strengthening cost control and rationalization of administrative decisions, where Managerial accounting methods have faced many challenges that resulted in the need to develop their methods as an internal system of information which contributes to providing appropriate information that meets the requirements of modern management through the approaches and methods developed for Managerial accounting, which some call flexible or lean accounting tools[1]. The development of these methods integrates accounting information systems within industrial companies to ensure the rationalization of costs and strengthen oversight, and the provision of appropriate information contributes to the rationalization of the correct administrative decisions[2]. In the light of this development in management systems, cost accounting and Managerial accounting, the problem of this research is shown as the extent to which the government sector in Iraq uses Managerial accounting innovations, the most important of which being VCA (Value Chain Analysis), activity-based cost-management method - TDABC, reference measures method – BM, target cost method – TC, and strategic analysis method – SWOT.

### 1.1. Literature review

Business establishments seek to apply modern methods in cost management (innovations) with the aim of achieving a competitive advantage by improving performance rates which is done through achieving a

number of sub-goals that can be summarized as follows [3]. The studies dealt with the concept of Managerial accounting innovations as defined by a study carried out by [4, 5] as a new method or idea that is perceived by the application-based facility and that is embraced as a basic principle of financial and non-financial information systems that help management in making decisions to achieve the strategic goals of the facility. The study by [6, 7] confirmed that the establishment applied new techniques or tools in managerial accounting with the aim of rationalizing costs, tightening control over them, and improving rates of both operational and financial performance. Hence, it can be said that the intended Managerial accounting innovations can be defined as: "a set of accounting methods and tools based on developments in the administrative and industrial environment that accounting services provide by using financial and non-financial information in order to enable the management to plan and implement the specific strategy of the facility, with the aim of helping it achieve its goals and support its competitive position so as to enable it to grow and continue." There are many methods developed for strategic Managerial accounting, and they will increase and develop as the industrial and administrative environment in which facilities operate, which are characterized today by dynamic and intense competition. The researcher briefly discusses the most important of these developed methods, focusing on the concept and definition of each of them.

### **1.1.1. Activity-based costing approach**

The Activity-Based Costing approach is defined on the basis of the activity as a methodology for measuring the costs and performance of activities, resources and products, especially the resources that are allocated to activities as well as the activities that are allocated to produce a specific product based on the degree of its use as this approach involves the causal relationships between cost drivers and various activities, then allocation of these costs of the activities to the products based on specific causal relationships between the drive (cause) and the activities through which the product or service is produced [8]. This approach provides valuable and realistic information for the purposes of managing, planning and rationalizing the cost of production in establishments better than traditional systems and methods, especially in companies that are characterized by complexity in their operations and large amounts of indirect costs, as well as complexity and diversity of products. The study by [9] indicated that the implementation of the ABC system is based on several steps, as follows

### **1.1.2. Time-driven activity-based costing approach**

This approach is an extension and development of the activity-based costing ABC approach. The TD-ABC approach leads to dispensing with the investigation process and conducting interviews to determine the groups of resources, which results in saving the time required for these activities, as it depends on simple time estimates such as direct observation of operations, and facilitates the process of accounting for complex activities by using time equations which accurately indicate the time spent in each form. This approach saves the time spent in the process of collecting and analyzing data, and this activity is characterized by the ease of use, presentation and modernization. The system enables accurate representation of the deficit or increase of production capacity by measuring energy per unit of time [10, 11].

### **1.1.3. Balanced scorecard approach**

It is an integrated system for evaluating the enterprise's strategic performance management by focusing on a set of flexible financial and non-financial measures known as "the five basic dimensions" to achieve the strategic goals and improve the overall performance of the facility. The balanced scorecard is a tool for translating the establishment's vision and strategy into a number of concrete measures of performance. Despite this, it is considered more than an evaluation tool, as its importance extends to drawing a magnified image of management within the facility every year, including customers, as an essential part of the facility's performance, and works to integrate financial measures with other key performance indicators in the various dimensions of the card such as the dimension of the client and internal processes and organizational growth, learning and innovation, and thus this card has covered all aspects of performance associated with the facility, both internally and externally [12].

### **1.1.4. Benchmarking method**

It is one of the modern managerial accounting methods that aims at managing the strategic performance of the facility through an external comparison between financial and non-financial indicators and between the performance indicators of the internationally distinguished enterprise in the field of industry, as well as an

internal comparison between the performance indicators of distinct departments within the same institution, in order to identify the performance gap and try to overcome it, and to support the continuous improvements of the institution's performance in a manner that ensures the strengthening of global competition[13].

#### **1.1.5. –Target costing approach**

It is the cost that the establishment is willing to bear according to the competitive prices that can be used to reach the required profit and connects three variables which are the target market price, the target profit margin and the target cost. The target cost method is characterized by several characteristics, such as[1].

The target costing approach is a customer-oriented system that works to satisfy their needs and meet their desires in the product planning and design stages, in order to gain more customers and expand the market share of the facility[14]. This approach sets maximum cost limits during the design and planning stages of the product or development process by setting the target cost for each activity in the value chain in the design, as well as the production and delivery process of products in order to achieve the target profit.

Target costing is regarded as a tool for planning and control at the administrative and accounting levels through its use of direct cost targets, resources and activities from the beginning of planning and designing the production to services with after-sale services and disposal of the product. Target costing allocates the total cost to the product life cycle through planning and costing at the design stage. Target costing works to achieve the goals of higher management and to improve profitability, reduce costs and support the company's competitive position in the long term.

#### **1.1.6. The activity-based management method**

The study by [15] defined the activity-based management as a system that focuses on managing activities as a basis for improving the value provided to scientists for clients and the profit resulting from the provision of this value, and includes the ABM method of analysing the causes of cost and activities and measuring performance based on the ABC method as the primary source of this data. Using this data, the activity-based management system directs and optimizes the use of resources to support the value provided to clients and various stakeholders. Moreover, activity-based management is used in analysing product specifications and strategic analysis to achieve the company's competitive advantages. It is also used in internal reference measurement to comply with market and competition requirements, analysis and improvement of operations, profitability analysis and pricing process.

#### **1.1.7. The value chain analysis method**

The idea of the value chain was proposed by MICHAEL PORTER in 1985 to depict how customer value is accumulated through a series of activities and internal instructions implemented by the company to design, produce, market, present and support their products. The value chain of the company and the way in which individual activities are implemented is a reflection of its history and strategy as well as the way this strategy is implemented [16], while [17],[18] defines the value chain as “a series of company functions in which the customer's benefit is added to the products.” This definition includes focusing the value chain on the company's jobs that add its benefit or value to the customer, starting from the product design and until it gets to the consumer, and excluding any jobs that do not add value to the customer. The researcher seeks through this research to test the following hypotheses: There are no significant differences between the opinions of those surveyed in the government sector in Iraq regarding the reality of using modern managerial accounting.

There are no significant differences between the opinions of those investigated regarding the factors that limit the application of strategic management accounting innovations by the government sector in Iraq.

## **2. Research methods**

In order to identify the research problem broadly towards achieving the goals and testing its hypotheses, the researcher relied on the curriculum. 500 questionnaires were prepared and distributed to account and production managers in the governmental sectors in Iraq represented by the industrial, agricultural and service sectors, and after one month, 375 valid questionnaires were received, which represent 75% of the total number of questionnaires. The researchers used the statistical methods represented by choosing KA2. The KRUSKAL WALLIS method and the standard deviation for analysing and studying the research variables.

### 3. Results and discussions

*First: The Nature of Strategic Management Accounting Innovations Used by the Government Sector in Iraq*

The first hypothesis of the research states that "there are no significant differences between the opinions of those investigated regarding the developments of strategic management accounting used in the government sector in Iraq." Using the KA square (KA2) method showed that this hypothesis was incorrect, as follows:

Table 1. The results of selecting the KA square (KA2) regarding the strategic management accounting innovations used by the government sector in Iraq

Variable code	Industrial sector	Agricultural sector	Service sector	KA square (KA2) selection	Level of significance
Activity - based costing method	65.8%	52%	41%	16.154	0.003
Targeted cost method TC	64.4%	49.5%	38%	19.145	0.002
Cost method based on time-oriented activity DABC	52.4%	44.8%	51%	12.154	0.008
Benchmarking method BM	40.8%	49%	54%	11.142	0.003
Balanced scorecard method BSC	64.2%	48%	49%	13.145	0.009
Product life cycle analysis method	40.5%	68%	51%	11.016	0.034
Value chain analysis method	61.2%	57%	60%	7.158	0.070
Activity-based management method	53.2%	54%	52%	6.147	0.548
Zero stock method or production on time JIT	42.2%	52%	52%	8.189	0.328
Strategic analysis method	78.8%	61%	68%	10.14	0.005

- Above than 60% indicates that the sector is applying it well.
- Under than 60% and above 40% indicate that the sector is applying it moderately.
- Under 40% indicates that the sector is applying in scarcely.

It is clear from the results shown in Table No. (1), at the total level, that there is a statistically significant difference between the administrators of the departments under study concerning the application of the targeted cost method and the activity-based cost method with a significant level (0.001 and 0.005), respectively. The opinions of those investigated have converged on the rest of the methods, which comes at the forefront of these methods in terms of application (strategic analysis method, balanced scorecard, benchmarking method of performance) with a level of significance of 0.005, 0.009, and 0.003, respectively.

On the detailed level, it is possible to arrange the use of methods within the government sector in Iraq as follows:

- In the industrial sector, in the first place came the method of strategic analysis with 87.8%, in the second place came the activity-based cost method with 65.8%, and the target cost method came third with 64.4%, while the rest of the methods were applied moderately.
- In the service sector, in the first place came the strategic analysis method with 68%, in the second place came the value chain analysis method with 70%, and the benchmarking method came in the third place with 54%, while the rest of the methods are applied moderately.

The researcher concludes from the above that the government sector in Iraq is applying the SOWT strategic analysis method well, while the significance and extent of application level after that varied according to each sector.

*Second: The Factors That Limit the Application of Strategic Managerial Accounting Innovations by the Government Sector in Iraq*

The second hypothesis of the research states that "there are no significant differences between the opinions of those investigated regarding the factors that limit the application of strategic management accounting innovations by the government sector in Iraq. The most important results drawn from the statistical analysis to test the validity of this hypothesis, as shown in Table No. (2), indicate the following: -

Table 2. The results of the KRUSKAL-WALLIS test, according to sectors, on the factors that limit the application of strategic management accounting innovations by the government sector in Iraq

<b>Factors that limit the application of strategic management accounting innovations by the government sector</b>	<b>KRUSKAL-WALLIS</b>	<b>Standard deviation</b>	<b>Level of significance</b>
Government sector administration's lack of knowledge of administrative accounting innovations	4.148	0.89	0.987
Government sector management's lack of faith in the feasibility of applying management accounting innovations	6.964	0.99	0.941
The belief in the high cost of applying management accounting innovations	5.874	1.02	0.874
The lack of qualified accountants in the government sector to apply management accounting innovations	5.987	0.94	0.874
The lack of qualified graduates to apply management accounting innovations	4.158	0.89	0.884
Mismatch between what accountant studies at the university and the companies' application of management accounting innovations	5.871	0.98	0.984
The lack of training programs in the government sector to follow up on developments in the field of managerial accounting	5.941	0.89	0.984

Factors that limit the application of strategic management accounting innovations by the government sector	KRUSKAL-WALLIS	Standard deviation	Level of significance
The working environment in Iraq does not encourage the application of management accounting innovations	8.178	0.89	0.884
Resisting change to apply managerial accounting innovations by managers	5.987	1.03	0.941
Total	5.198	0.98	0.654

#### 4. Conclusions

The researcher reached a set of conclusions as follows:

1. There is a statistically significant difference between the administrations of the departments under study regarding the application of the targeted cost method and activity- based cost method, with a significant level (0.001, 0.005), respectively. The opinions of those investigated have converged on the rest of the methods which comes at to the forefront of these methods in terms of application come the strategic analysis method, the balanced scorecard method, and benchmarking method with a level of significance of 0.005, 0.009, and 0.003, respectively.
2. There are no statistically significant differences between the views of those investigated regarding the factors that limit the application of strategic management accounting innovations by the government sector in Iraq, as the KRUSKAL – WALLIS value reached 5.198 at the level of significance 0.654.
3. Department officials confirmed that the most important factors that limit the application of strategic management accounting innovations are in the following order:
  - The working environment in Iraq does not encourage the application of management accounting innovations.
  - The government sector management’s lack of faith in the feasibility of applying management accounting innovations.
  - The lack of training programs in the government sector to follow up on developments in the field of management accounting.
  - Resisting change to apply management accounting innovations by managers.
  - The government sector management’s lack of faith in the feasibility of applying management accounting innovations.
  - From the foregoing, the researchers believe that the awareness of the government sector management should increase in the feasibility of applying administrative accounting innovations as an entry point for applying financial performance, and that the government sector administration is committed to holding training courses and programs to prepare and qualify a generation of accountants that enables it to understand and apply the innovations in the field of management accounting. In addition to that, Senior management should develop effective controls and policies to resist change by managers on implementing managerial accounting innovations.

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