

# The Impact of Company Characteristics on Budget Implementation: An Investigative Study Applied to a Sample of Employees at Kufa Cement Plant

**Sumaya Mahdi Al-Inizi**

General Directorate of Wasit Education, Iraq

[hayder.baraka.kr@gmail.com](mailto:hayder.baraka.kr@gmail.com)

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## ABSTRACT

The research aimed to uncover the impact of company characteristics, represented by the dimensions of size, age, type, and structure, on budget implementation, represented by its three dimensions, namely, operational budget, cash budget, and capital budget, in Kufa Cement Plant. The current research highlights the research vocabulary philosophically by collecting concepts and literary contributions of researchers in this framework in order to achieve the research objective. Methodologically, a questionnaire was used as the primary tool to collect data from the sample individuals, including managers, employees, technicians, and administrators. A total of 262 questionnaires were distributed, and 250 were retrieved. A variety of statistical methods and techniques were employed in data processing and hypothesis testing, including arithmetic mean, Spearman correlation, and regression analysis. The research adopted a descriptive-analytical methodology in dealing with theoretical and field data on its variables, which relies on describing the case and then analyzing it to reach conclusions. Several results were obtained, where the most important one was that there is a significant effect of company characteristics (age, size, type, and ownership structure) on budget implementation (operational, cash, and capital) in Kufa Cement Plant. The key recommendations emphasized focusing more on addressing the substantial deviations between actual cash and previously planned budgets in the studied plant.

**Keywords:** Budget, Kufa Cement Plant

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## Introduction

Industry is a fundamental pillar of the country's economic development, as such development reflects the progress of the state, that primarily relies on industry in its economic activities. Economically, industry refers to the human activity that entails changing the shape or nature of raw materials in various forms or partially changing them. Industry itself began when humans realized metals and how to manufacture them, such as the production of tools like sickles and plows. Initially, industry represented the production of materials and tools from raw and local materials, evolving with the development of its tools and methods until the industrial revolution, which encompassed a series of changes leading to the innovation of new methods in the production process. Technological and cognitive advancements have also helped expand the scope of industries, bringing about a significant revolution in the field. As a result of these changes and developments in the industrial sector, all factories and industrial companies strive to keep pace with these changes and contain them through pre-planning and controlling the affairs of internal and external factories and companies to protect their resources. Hence, the importance of budgets emerged as the approach followed by companies to develop a realistic plan for the future, setting desired goals and monitoring costs and resources needed by the company to achieve them. Corporate budgets serve as a regulatory method adopted by companies to compare actual performance with expected performance, uncovering deficiencies and shortcomings and developing necessary plans to avoid or adapt to them. Accordingly, the research is divided into four sections: the first section presents the research methodology, and the second section is dedicated to

presenting the theoretical framework. The third section includes the extraction of results and testing hypotheses, and the fourth section presents the most important conclusions and recommendations.

## First Section: Methodology

### 1. Research Problem:

Some industrial plants struggle with future planning for their operations. There may be a lack of awareness among these factories regarding the importance of budget as a fundamental tool for both short-term and long-term planning and policy-making. This problem increases significantly in small and continuous-sized factories, and it can be expressed through the following questions:

1. Does the factory implement budgets in their various forms?
2. Is there an impact of age on budget implementation?
3. Is there an impact of size on budget implementation?
4. Is there an impact of structure on budget implementation?

### 2. Research Significance:

The preparation and implementation of budgets in their various forms are highly important topics for the management of small and medium-sized industrial factories. The importance of this research lies in providing an appropriate scientific contribution to uncover the level of budget implementation in industrial factories (specifically the Cement Plant in Kufa), the impact of factory characteristics on budget implementation, and the significance of factories operating in the Najaf Governorate, which is one of the essential pillars of the Iraqi economy.

### 3. Research Objectives:

The research aims to achieve the following objectives:

1. Identifying the types of budgets implemented at Kufa Cement Plant.
2. Studying the implementation of budgets in the study area by the plant.
3. Determining the impact of plant characteristics (type of activity, age, size, and structure) on budget implementation.

### 4. Research Hypotheses:

In light of the research problem and objectives, the current research attempts to test the validity of the following main hypothesis:

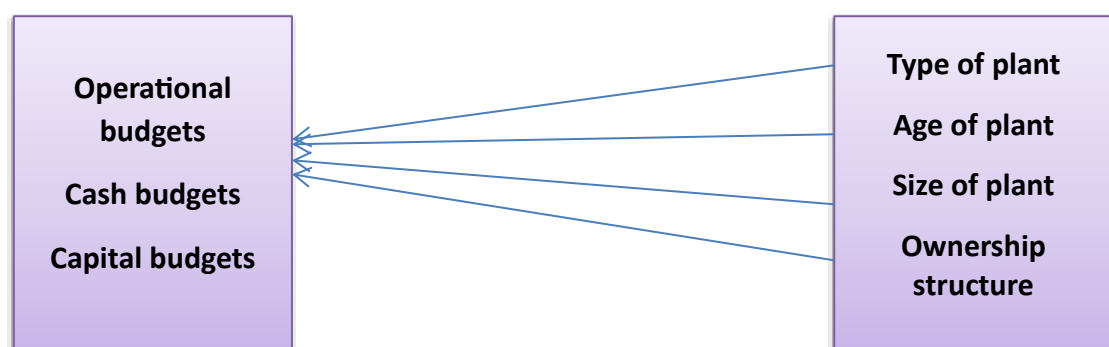
"There is a statistically significant impact of plant characteristics on budget implementation." Sub-hypotheses stemming from this main hypothesis include:

1. There is an impact of the type of activity on budget implementation in the study area.
2. The age of the plant affects the budget implementation in the study area.
3. There is an impact of the plant size on budget implementation in the study area.
4. The structure of the plant affects the budget implementation in the study area.

### Conceptual Framework of the Research:

Factory Characteristics

> Budgets



## **Sixth Section: Research Community and Sample**

The community represents all the elements of the problem to be studied, as it is the foundation and cornerstone for factories, and organizations, contributing to the distinction of these entities and the progress of the country by presenting ideas and innovations that assist in this regard. Therefore, the study community consists of the human resources at Kufa Cement Plant in Najaf, which was adopted as the study community due to its significance. The survey method was adopted for data collection, and the sample consisted of managers, technical, and administrative employees. The total number of employees in this plant was (1106), and the sample size was (262), where (250) responses were retrieved, representing (95%) of the study community. The number of surveys deemed invalid for analysis was (12).

## **Seventh: Research Methodology**

This research adopts the descriptive-analytical approach, which is one form of quantitative analysis and interpretation organized to describe a specific problem and depict it quantitatively through collecting data and information about the problem or phenomenon discussed in this research. It is titled "The Impact of Company Characteristics on Budget Implementation in the Industrial Sector: An Investigative Study at Kufa Cement Plant. Furthermore, the research adopts statistical analysis by using SPSS statistical software.

## **Eighth: Research Limits**

The research limits are represented in temporal limits for distributing and collecting the questionnaire, which ranged from March 1, 2024, to April 1, 2024. Spatial limits were applied within Kufa Cement Plant in Najaf.

## **Ninth: Data Collection Methods**

1. Theoretical Aspect: The researcher relied on Arabic books, journals, articles, doctoral theses, and university dissertations related to the research topic, in addition to utilizing the internet network.
2. Practical Aspect: Data collection was carried out through the use of a questionnaire as the primary tool to obtain information from employees in the plant.

## **Second Section: Theoretical Framework**

### **First: the concept of budget**

The word "budget" is derived from the French word "bougeotte", which historically referred to the disclosure prepared by the state to estimate its revenues and expenditures. The preparation of budget is postulated in all countries with diverse economic and political systems, as it helps in organizing the performance of tasks across various aspects of life. The budget is prepared at the level of the economic unit, and at the level of the state and its units. It was formally associated with the organization of business with the emergence of industrial capitalism, which appeared with the start of the Industrial Revolution in Europe in the eighteenth century, which posed a challenge to industrial management. The first budget prepared at the economic unit level dates back to the year 1920, which aimed at using it as a tool for cost management and cash flows in large industrial companies. Additionally, the emergence of a scientific management philosophy focusing on detailed information as the basis for decision-making, significantly contributed to the development of managerial accounting and budgeting techniques. (Al-Saadi, 2016: 483). The concept of general budget evolved in line with developments in the economic and social aspects of the state. It gained particular importance due to the focus on economic aspects and the evolution of its methods and techniques. The general budget has become the primary financial plan for achieving economic and social development programs. The general budget holds particular importance in the life of the state, both politically and economically. Politically, it reflects the government's agenda over a specified period of time and translates the state's political plan into numbers. Economically and socially, by adjusting the distribution of national income among various social strata, it reallocates income from some individuals to become general revenue, which is

then redistributed to another social stratum as new income (Karim et al., 2021: 16). Most countries around the world have agreed to depict their government's financial program in a financial document known as the state's general budget. This document includes an initial determination of the state's activities to ensure the realization of its interests and objectives. The concepts related to the general budget have varied according to the different scientific backgrounds from which it is viewed, as well as the priorities and functions of the general budget, which are inherently linked to the prevailing economic and social systems in the state and the political philosophy it adheres to. However, despite the differences in the details of these definitions, they generally agree that the general budget, as Al-Qurashi (2012: 396) defines it, is as follows:

Table (1): Definitions of the Budget According to the Opinions of Some Researchers and Authors

No	Researcher, year and page	Definitions
1	(Al-Ramahi, 2009: 45)	It is the plan that includes a set of approved estimates of the state's expenditures and resources from a future fiscal year in accordance with the general policy of the state, which is carried out in accordance with applicable laws and regulations.
2	Hansent et al, 2009: 250	It is a comprehensive financial plan consisting of the budgets of various departments and individual activities, which can be divided into an operational budget and a financial budget. The operating budget includes all the items that make up the income statement.
3	Noreen et al, 2011: 288	It is a quantitative plan for the acquisition and use of resources over a specific period of time and is used for two different purposes: planning and control.
4	Horngren et al, 2012: 184	It is a quantitative expression of the plan of action proposed by management for a specific period with the aim of helping to coordinate what must be done to implement that plan.
5	(Karim et al., 2021: 16)	They are tables that include an estimate of revenues and expenditures for one fiscal year specified in the budget law.

Source: The table was prepared by the researcher based on the information provided in the sources

### **Secondly: The Importance of Budget**

The importance of budget is manifested in the following points: (Daish, 2018: 3).

1. Placing general equilibrium in the national economy under focus.
2. Achieving balance between the two aspects of the annual budget: revenues and expenditures.
3. Documenting all funds received or spent on services.
4. It is an important tool used by the legislative authority to assess the efficiency of state institutions.
5. An effective and essential means to achieve the achievements that the state aims to accomplish in the coming fiscal year.
6. Granting the legislative authority the ability to evaluate the inputs and outputs resulting from the budget and its effectiveness in achieving development goals at the economic and social levels.

### **Thirdly: Types of Budgets**

#### **1. Operational budget**

The success of any organization, whether industrial, service-oriented, or commercial, is somewhat measured by its profitability, achieved through reducing expenses and production costs, as well as controlling and monitoring expenditures. This is not an easy task, especially in large

organizations, and it can only be achieved through following academic methods, including budget (Bakr, 2007: 70).

Operational budget consists of several sub-budgets prepared after completing the sales budget. Companies and organizations develop a set of operational budgets to determine how operations and activities will be performed within the organization. All operational budgets found in industrial establishments have their counterparts in service institutions, except that in non-profit service institutions, there is an absence of inventory budget for production. There is a sales budget within the operational budget of service institutions, which determines the services provided. Typically, the produced services match the services sold, but in non-profit service institutions, the difference is replacing the sales budget with a budget that determines the levels of service provision in the previous year (Al-Hashimi & Al-Hasnawi, 2018: 17).

Operational budget is defined as the budget that accepts the operational decisions' effects, including sales forecasts, net profit, cost of goods sold, selling expenses, administrative expenses, and general expenses. Therefore, the cornerstone of operational budget is expected sales (Hassan & Raji, 2020: 63). It is a comprehensive detailed plan prepared and distributed before the start of operations, serving as a planning, controlling tool, and performance evaluation standard. Operational budget includes sub-budgets for operating revenues and expenses (Obaid et al., 2021: 36).

### **Cash budget**

Cash budget is defined as focusing on the movement of all cash and cash equivalents that can be quickly converted into cash (Smith et al., 1998: 209). The definition of cash budget does not differ from the general definition of budget in its use as a tool for control and planning of company resources, as well as its use in performance evaluation and as a means of communication and coordination between different units within the company. However, the nature of budget varies by dividing it into operational budget and financial budget, with cash budget (liquidity) falling under financial budget. Company management is described as effective when it can achieve a balance between the abundance of incoming and outgoing funds, as well as utilizing the available cash efficiently and effectively. It's worth noting that all cash assets held by the company do not generate any revenue or profits, as they are considered non-invested capital. Determining cash flows effectively and sufficiently in line with the company's requirements necessitates future planning and forecasting of both incoming and outgoing cash flows, and taking necessary actions to achieve alignment between them. From this perspective, there must be a tool available to maintain both incoming and outgoing cash flows to minimize the risks of converting financial assets into cash, as well as effectively investing them, and achieving a balance between incoming and outgoing cash flows by equalizing the cash flow. (Al-Jawani, 2016: 100).

Monetary policy is one of the overall economic policies implemented by the monetary authority represented by the central bank, through the banking system, and in coordination or mutual influence with the financial system, which includes institutions such as the stock market, insurance companies, and investment banks that play a significant role in managing money and credit to achieve economic growth and price stability. Regardless of the variations in concepts of monetary policy, they all aim to control the money supply. Thus, monetary policy is defined as "the rules, procedures, and tools relied upon by the monetary authority to influence money supply, interest rates, and credit" (Mohammed & Kazim, 2020: 337).

### **Capital budget**

Capital budget is defined as the process of making long-term planning decisions for investing in projects and programs expected to yield benefits or future returns over several years. These decisions should be linked to the objectives and strategies of governmental units (Garrison, 2000: 736). The term "capital budget" is also used to describe the actions related to planning and financing capital expenditures for purchasing machinery and equipment, establishing new production lines, or upgrading equipment (Hornigren, 2010: 748). Investment budgets require substantial financial investments, and obstacles to such investments extend over future time periods. Therefore, management in the



organization or company must take sufficient care and exert the necessary effort to study the profitability of these projects. Investing in loss-making projects or those with low returns will have long-term effects. Additionally, disposing of projects later if they prove to be unprofitable or loss-making will incur significant costs (Abu Nassar, 2010: 216).

Capital budget is one of the fiscal policy tools of the state, as it represents a measure of the value of governmental institutions. Governments recognized this type of budget concurrently with the effects of the Great Depression in 1920, as internal and external borrowing policy was one of the characteristics of financing governmental programs to cover the deficits in their budgets. Despite the philosophy that called for not encouraging governments to borrow for the purpose of financing their programs, except in emergency cases such as wars and disasters, it was the optimal solution for decision-makers in financing governmental programs. The concept of capital budgets evolved as a description of how to plan significant and large investments for projects executed over the long term, such as purchasing modern equipment and constructing factories (Ali & Hamza, 2014: 3).

#### Fourthly: Kufa Cement Plant

The plant was established in 1979 and consists of four kilns, two of which are halted for maintenance purposes, and two are operational. Usually, only one kiln is operated due to the shortage of electrical power supplied to the plant. The designed capacity of the plant is 1500 tons per day for each kiln, while the actual capacity ranges from 1200 to 1350 tons per day. The length of the kiln is 175 meters, and the height of the furnace is approximately 50 meters. The plant is located within an area characterized by the presence of industrial facilities such as thermoset factories, limestone brick factories, asphalt plants, and a power generation station. The prevailing character of adjacent lands is agricultural, and the activity is classified as a Class (A) pollutant. The raw materials used in the plant are as follows:

1. Limestone, which is obtained from the crushers area in the Bahr Al-Najaf region, is approximately 40 kilometers away. The limestone is transported either by a specially designed conveyor belt or by dump trucks in case the necessary electrical power for operating the conveyor belt is unavailable.
2. Water, which is obtained from the Euphrates River using water extraction machines.
3. Soil, which is obtained from quarries in the Bahr Al-Najaf region.

The reason for the pollution affecting the environment adjacent to the plant, especially in areas exposed to prevailing winds in Al-Mundhirah district, is the lack of dust precipitators for the kilns. Dust precipitators are one of the essential techniques for controlling and mitigating air pollutants, and they play a significant role in treating gases emitted from furnace chimneys. As for industrial wastewater, only wastewater from washing yards and external streets is available, which is disposed of in sedimentation tanks and then transported by tankers to the treatment station in Najaf (Ministry of Environment, 2007: 25).

### Third Section

#### Practical Aspect of Research

Firstly: Testing the Reliability of the Research Tool

To ensure the reliability of the tool, Cronbach's alpha equation was applied to all sections, dimensions, and the overall research tool, as shown in the following table:

Table (2) Reliability Coefficients for the Research Tool According to Cronbach's Alpha Method

The axe	Field	Stability value
Company characteristics	Size, age, type, and structure	0.887
Applying budgets	Operational budget	0.891
		0.796
		0.843

	Cash budget	0.813
	Capital budget	
<b>Cronbach's alpha coefficient for the questionnaire as a whole</b>		

The table (2) shows that all reliability coefficients using Cronbach's alpha method were acceptable for application, ranging between (0.843-0.896). Most studies indicate that reliability coefficients with values above 0.60 are acceptable for application purposes.

### Secondly: Analyzing the axes of questionnaire

Table (3) indicates that the implementation of capital budget ranked first in terms of the intensity of responses according to the answers of the employees at Kufa Cement Plant, whereas the least important aspect was the application of cash budget. This outcome underscores the importance of focusing on budget implementation in the plant's operations, as documented in Table (3). The research sample members unanimously agree on the significant focus of the plant towards budget implementation to a high degree. The overall arithmetic mean was (3.95), which is higher than the hypothetical mean of (3), representing the cutoff between agreement and disagreement. The standard deviation recorded (0.700), indicating consistency in employees' responses regarding budget implementation, with a relative importance of (79%). This illustrates that budget implementation in the researched plant could improve if conducive and optimal conditions are provided.

Table (3): Importance Level of the Independent Variable (Budget Implementation)

Dimensions	Arithmetic mean	Standard deviation	Relative importance	Level of response
Operating budget	3.20	0.601	%64	Agree
Cash budget	4.12	0.565	%82.4	Strongly agree
Capital budget	4.54	0.735	%91	Strongly agree
General Average	3.95	0.633	%79	Agree

The results in Table (4) indicate a significant effect of company type on budget implementation at the overall level of Kufa Cement Plant. The calculated F-value (29.47) is greater than the tabulated value (3.920) at a significance level of (0.05). The determination coefficient (24%) indicates the proportion of the company type's effect on budget implementation. Based on these results, we accept the first sub-hypothesis, which states that "there is a significant effect of the company type on budget implementation in its three types. Similarly, the results in Table (4) show a significant effect of the second independent variable, represented by the company's age, on budget implementation in the studied company. The calculated F-value (30.47) is higher than the tabulated value (3.920) at a significance level of (0.05). The determination coefficient (44%) signifies the level of the company's age effect on budget implementation. Therefore, we accept the second sub-hypothesis derived from the main hypothesis, which states that "there is a significant effect of the company's age on budget implementation in its three types.

Furthermore, the results in Table (4) reveal a significant effect of company size on budget implementation in the researched company. The calculated F-value (29.47) is greater than the tabulated value (70.71) at a significance level of (0.05). The determination coefficient (52%) demonstrates the level of the company size's effect on budget implementation. Consequently, we accept the third sub-hypothesis derived from the main hypothesis, which states that "there is a significant effect of the company size on budget implementation in its three types. Additionally, the results in Table (4) indicate a significant effect of ownership structure on budget implementation in the researched company. The calculated F-value (54.71) is greater than the tabulated value (3.920) at a significance level of (0.05). The determination coefficient (34%) reflects the level of ownership structure's effect on budget implementation. Hence, we accept the fourth sub-hypothesis derived from the main hypothesis, which states that "there is a significant effect of ownership structure on budget implementation in its three types.

Lastly, the results in Table (4) show a significant and meaningful effect of company characteristics on budget implementation in its three types combined. The calculated F-value (43.64) is greater than the tabulated value (3.920) at a significance level of (0.05). The determination coefficient (40%) signifies the proportion of company characteristics' effect on budget implementation. Consequently, we accept the main hypothesis, which states that "there is a significant effect of company characteristics on budget implementation.

Independent variable		Coefficient of determination	F calculated	Sig.	Dependent variable
Types of budgets	Type of com.	%24	29.47	0.000	Budget implementation
	Age of com.	%44	30.47	0.000	
	Size of com.	%52	70.71	0.000	
	Ownership construction	%34	54.71	0.000	
Characteristics of companies	%40	43.64	0.000		

## Fourth Section: Results and Recommendations

### First: Results

1. There is a high degree of importance to the characteristics of companies in implementing budgets at Kufa Cement Plant.
2. There is a correlation and impact among the types of activities for the plant in budget implementation. This is because the type of company plays a significant role in budget implementation and the types of budgets applied.
3. There is a high correlation with the age of the plant in budget implementation. This result indicates that the age of the company plays an important role in budget implementation. The age of the company indicates its size, seniority, and ability to deal with budget implementation.
4. There is a significant effect of company size on budget implementation, indicating the importance of size in the budget process, which in turn regulates budgets. This is reflected in the quantity of human resources and their experience available for budget implementation.
5. There is a correlation and impact of the ownership structure of the company on budget implementation. This positively reflects on budget implementation, due to the coordination of the structure, which in turn helps identify dedicated departments and a specialized cadre in the study area..

### Second: Recommendations

1. Pay attention to implementing a standard costing system in Kufa Cement Plant under study.
2. Taking into account the proper scientific and practical foundations in preparing, executing, and monitoring budget implementation by Kufa Cement Plant.
3. The plant shall study the proposals submitted by different management levels.
4. Focus more on addressing significant deviations between actual cash and previously planned cash flows in the studied plant.

## References

- Abu Nasar, M. (2010). *Managerial Accounting*. (3<sup>rd</sup> ed.). Dar Wael Publishing and Distribution, Amman.
- Al-Hashimi, A. M. H., & Al-Hasnawi, S. B. M. (2018). Activity-Based Accounting Applications in the Preparation of Operational Budgets in the Government Health Sector - An Applied Research in the Health Department of Thi Qar Governorate]. *Thi Qar University Journal*, 1, Iraq.
- Ali, N. J. M., & Hamza, H. J. (2014). State Capital Budget in the Light of Strategic Planning Trends. *Al-Muthanna Journal of Administrative and Economic Sciences*, 3(7), Iraq.
- Al-Juwaani, S. S. (2016). The Impact of Cash Budget Efficiency on Financial Performance: An Applied Study on Masaf Al-Shamal Company in Iraq. *Tikrit Journal of Administrative and Economic Sciences*, 12(35), Salah Al-Din.



- Al-Quraishi, H. A. H. (2012). An Analytical Study of the Reasons for the Deficit of the General Budget of the State in Iraq]. *Journal of Management and Economics*, (93), Baghdad.
- Al-Ramahi, N. M. A. (2009) *Governmental Accounting*. (1<sup>st</sup> ed.). Dar Safaa Publishing and Distribution, Amman, Jordan.
- Al-Saadi, H. M. F. (2016). The Role of Open Budget in Achieving Accountability and Transparency and Its Reflection on Administrative and Financial Corruption. *Journal of Economic and Administrative Sciences*, 22(90), Baghdad.
- Bakr, A. M. A. (2007). *The Feasibility of Implementing Activity-Based Budgets in the Jordanian Hospital Sector*. (Doctoral dissertation, Arab Academy for Financial and Banking Sciences, Faculty of Financial and Banking Sciences, Jordan).
- Garrison, N. (2000). *International Federation of Accounting*. "Perspectives on cost accounting for government." New York.
- Hansen, D. R., Mowen, M. M., & Guan, L. (2009). *Cost Management: Accounting & Control*" (6<sup>th</sup> ed.). South Western Educational Publishing.
- Horngren, C. T. (2010). *Cost Accounting A Managerial Emphasis* (13th ed.). Pearson Education Inc, USA.
- Horngren, C., Datar, S. M., & Rajan, M. V. (2012). *Cost Accounting Managerial Emphasis* (1<sup>st</sup> ed.). Prentice Hall Inc.
- Kareem, A. D., Hassan, M. G., & Al-Hassani, W. H. (2021). The Impact of Financial Planning Concept on the General Budget in Governmental Institutions: An Applied Study in One of the Governmental Universities. *Journal of Madinat Al-Ilm College*, 13(1), Iraq.
- Ministry of Environment, Planning and Technical Monitoring Department, Urban Environment Directorate, Industrial Activity Division. (2007). *The Environmental Situation of Kufa Cement Plant*], Najaf Al-Ashraf, Iraq.
- Mohammed, T. S., & Kazem, A. S. H. (2020). The Role of Monetary Policy in Managing Macroeconomic Stability in Iraq: An Analytical Study of the Monetary Policy of the Central Bank of Iraq for the Period from 2004 to 2018]. *Tikrit Journal of Administrative and Economic Sciences*, 16(52), Salah Al-Din.
- Noreen, E. W., Brewer, P. C., & Garrison, R. H. (2011). *Managerial Accounting for Managers*. (2<sup>nd</sup> ed.). McGraw-Hill/Irwin, New York.
- Obeid, Z. N., Jasim, B. F., & Abood, F. G. (2021). The Role of Private Morning Education Revenues in Supporting Operational Budget: An Applied Study in One of the Iraqi Universities for the Period 2013-2017]. *Al-Kut Journal of Economic and Administrative Sciences*, 13, Wasit.
- Smith, J. L, Kelth R.M. & Stephens, W. L (1998), *Financial Accounting*, McGraw-Hill Company New York, NY .