

Al-Maqar and Kerbstone Factory in Al-Kut City's Economic Performance was Assessed for the Years (2017–2021)

By

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Abstract

The study of the Muqarnas and Kerbstone production factory's economic situation and its suitability for attracting modern technologies, which would increase productivity and thereby contribute to achieving economic growth in Wasit Governorate, are shown. In addition, it is shown that the development of this sector contributes to the creation of job opportunities and the improvement of workers' technical skills with the opening of a technical. The research reached several conclusions, the most important of which are the results of the economic and financial evaluation criteria for the Muqarnas and kerbstone factory in Kut, showing positive results for the period (2017-2021), as we find that the rate of return of one dinar throughout the study period is greater than the correct one, which means that the factory is proceeding within its economic feasibility. We also discovered that the rate of invested capital turnover was high throughout the study period, which is evidence of the high share of invested capital in production and the value of production. As a result, it is important to pay attention to the process of periodically and continuously assessing the effectiveness of the economic performance of small construction industries to ensure the achievement of the set strategic objectives, identify deviations as soon as they occur, and prevent further deterioration.

Keywords: construction industries, kerbstone factory, Wasit province

Introduction

The process of evaluating the performance of existing economic units is characterized by greater care because most of these units are linked to economic development goals. Objectives that cannot be achieved using a comprehensive evaluation system for the performance of the production unit. The essence of the evaluation process is to compare the actual performance with specific indicators in advance to identify deviations, identify them, justify them and enhance their capabilities. To be achieved compared to private projects, as the primary objective of private projects is to achieve commercial profitability, the objective of public projects requires achieving an economic surplus and strategic and development goals.

First - the importance of research:

The method of evaluating these economic units' performance is marked by greater care because most of them are linked to economic development goals. Comparison of actual performance to planned indicators enables the detection of variances, justification of those discrepancies, and enhancement of performance capabilities. Objectives that cannot be accomplished using a detailed assessment system for the manufacturing unit's performance. Suppose public projects are to flourish in comparison to private businesses, whose major objective is to make commercial success. In that case, they must achieve an economic surplus in addition to strategic and development goals.

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Problem Statement

In Wasit Governorate, the construction industry still needs to be beset by several issues and barriers that prevent its development. In particular, Wasit Governorate's and Iraq's low productivity levels and reliance on imports to fill local demands deter investment and industrial concentration in the region.

The following aims are sought to be accomplished by the research:

- 1- A conceptual framework for the kerbstone industry is presented.
- 2- Calculation and analysis of metrics about the makeup of costs and revenues for the Kerbstone and Muqarnas factory in Kut for the years 2017–2021
- 3- Calculation and analysis of metrics for gauging the effectiveness of the plant-producing kerbstones and muqarnas in the city of Kut from 2017 to 2021

Study Hypothesis

The study is based on the premise that "the growth of the construction industries' work and the periodic evaluation of the effectiveness of their economic activities represents a factor in increasing the production capacity of these industries, on the one hand, and, on the other hand, their contribution to addressing the issue of unemployment as a tributary of employment and employment, and it has a significant impact on the process of economic development."

The concept of Kerbstone and its importance:

The concrete tile, known as a curbstone, is made into geometric forms and is a type of overlapping tile since it is put on compacted sand rather than compressed with cement mortar. The Romans were the first to use these floors when they built basic roadways between their homes, albeit in a different form. Muqarnas come in various shapes, styles, and sizes, providing room for creativity and design.

It was able to withstand those floors until now. Still, the world knew it and began using these floors after World War II when it caught the attention of the West during the war when they noticed that these floors could withstand high pressures and weights, as it is difficult to break and destroy it, and similar to that, the Europeans built thousands or even millions of meters of these concrete sidewalks, and since the end of the last century, it has become famous all over the world (). If we talk about Iraq specifically, since the beginning of 2005, the state began to cooperate with the coalition forces and the American Corps of Engineers in the reconstruction campaign, and these tiles were used in the streets and school corridors; Due to their aesthetics, features, and cost compared to other tiles.

Types of Kerbstone:

Curved curbs

They are curbs with angular side faces that are relatively tall. They are intended to stop cars from trying to leave the sidewalk or, at the very least, to stop them from doing so. Their height ranges from 20 to 50 centimeters. The face should ideally be slanted, but the angle should be at most 1 centimeter for every 3 centimeters of height. The upper corner should rotate with a radius of 2 to 8 cm.

This kind is typically used in streets, in front of walls, or adjacent to objects to prevent collisions. The barriers are placed (50 to 60 cm) outside the outside edge of the road.

Submerged curbstones

Most use is in the middle islands and the inner bar in the shoulders. The height of these curbs ranges from (10 to 15) cm, and the inclination of the face is either 1:1 or 1:2. They are made to make it simple for vehicles or pedestrians to pass them without a harsh concussion in figuring out the ductal division part's exterior shape at the crossings.

The second topic: analysis and calculation of the cost structure of the Muqarnas and Kerbstone factory

First: Muqarnas and Curbstone Factory (its structure and activities)

About the Muqarnas and Curbstone Factory

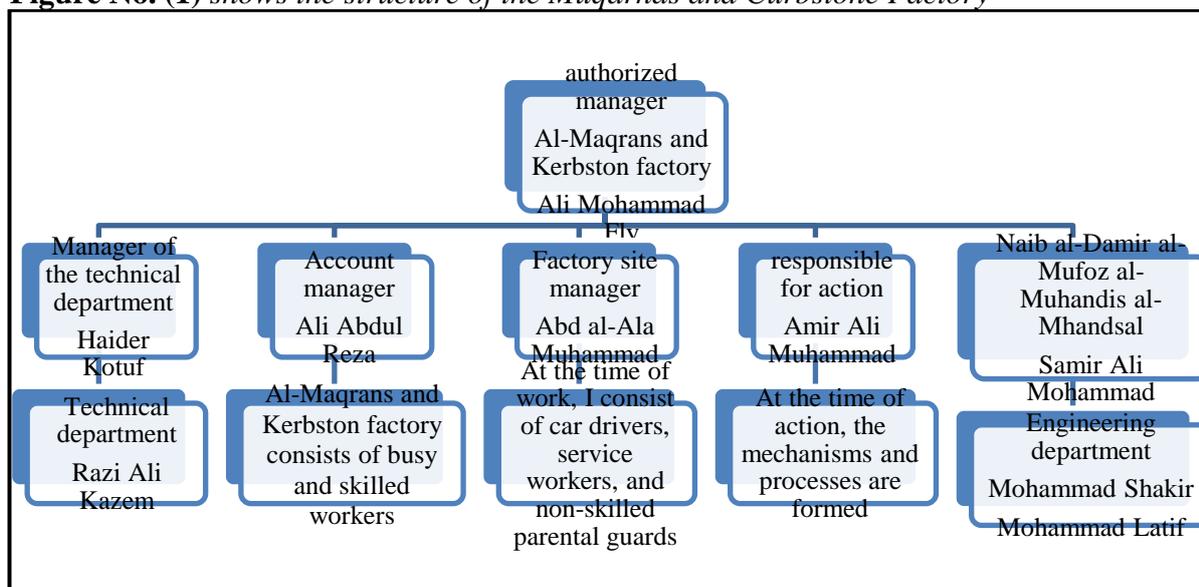
At first, it was a company working in processing raw materials and the rest of the construction requirements. The company was established in 2004 under the name of Al-Atkal Company. After (4) years, i.e., in 2008, a factory for producing blocks and stickers was established. Al-Masnaa in Al-Battar area (Kut-Baghdad) road, as this site was chosen because it is a field between the northern and southern districts of Wasit Governorate.

Similarly, the factory is close to the sources of raw materials in Badra and Sheikh Saad; the factory's distance from Badra quarries is 102 km, and its distance from Sheikh Saad (Ghariba Al-Maamel) is 95 km. The factory's area at the time was 750 square meters, but due to the reconstruction campaigns the governorate saw and the creation of new areas, these distances have decreased. Old regions' rehabilitation and the roads and walkways they require.

Noticing the increase in demand for muqarnas and Kerbstone, which was imported from Kuwait, Iran and northern Iraq, an integrated factory of Turkish origin was established on an area of 1000 square meters with its annexes and buildings. (Municipalities, the provincial council and the provincial office projects), where the supply rate reached (30%). As for the factory processing for the private sector (companies and contractors), their supply rate reached (80%) of the two materials, muqarnas and Kerbstone.

The structure of the Muqarnas and Kerbstone factory

Figure No. (1) shows the structure of the Muqarnas and Curbstone Factory



Source: Based on the field visit to the Muqarnas and Curbstone Factory and the meeting with the factory manager

Analysis of the Value of Production Inputs:

It represents the total elements of production involved in the production process of invested capital, raw materials and wages, as shown in the following formula:

$$\text{Total production factors (input value)} = \text{invested capital} + \text{raw materials} + \text{wages}$$

Table (1) *The value of inputs to the Muqarnas and Curbstone Factory for the period (2017-2021)*

the year	Invested Capital 1	Raw Materials 2	Fee 3	Input Value 4=3+2+1
2017	1091065000	1296000000	1053000000	2492365000
2018	1217940000	1383000000	1224000000	2723340000
2019	1263940000	1021500000	1161000000	2401540000
2020	1263940000	300960000	710000000	1635900000
2021	1420990000	1689360000	1377600000	3248110000

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

It is noted from the data of Table (1) that the highest value of production inputs was in 2021 when it amounted to (324,811,000) dinars, and the lowest value obtained by production inputs was in 2020, when it amounted to (163,590,000) dinars.

The index of the value of the total costs of the muqarnas and kerbstone factory

It appears as a result of the industrial establishment carrying out the manufacturing process to generate the required products. The total of the various expenses that were charged to production (.). Between 2017 and 2021, the costs were worth (213,112,0000) dinars and (285,830,000) dinars, respectively. The costs increased in 2018, reaching (236,232,0000) dinars at an annual rate of change that was (0.11%) positive due to the rise in labor costs and the cost of raw materials and equipment.

The years 2019 and 2020 witnessed a decrease in costs, as it amounted to (2011,560,000) dinars and (1,184,600,000) dinars, respectively, with annual rates of change, as it amounted to (-0.15%) negative and (-0.41%) negative, respectively, as a result of work being limited for reasons, the most important of which are the demonstrations in 2019 and the crisis Corona in 2020.

Table (2) *The value of the total costs of the Muqarnas and Curbstone Factory for the period (2017-2021)*

The Year	Wages, salaries and bonuses	The value of machinery and equipment	raw material value	The value of production inputs	total costs	Annual percentage change
2017	1053000000	610000000	1296000000	119820000	2131120000	-
2018	1224000000	720000000	1383000000	136920000	2362320000	0.11
2019	1161000000	765000000	1021500000	108960000	2011560000	-0.15
2020	710000000	765000000	300960000	47640000	1184600000	-0.41
2021	1377600000	890000000	1689360000	141180000	2858300000	1.41

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

It appears as a result of the industrial establishment carrying out the manufacturing process to generate the required products. The total of the various expenses that were charged to production (). Between 2017 and 2021, the costs were worth (213,112,0000) dinars and (285,830,000) dinars, respectively. The costs increased in 2018, reaching (236,232,0000) dinars at an annual rate of change that was (0.11%) positive due to the rise in labor costs and the cost of raw materials and equipment.

() Hassan Al-Najafi, Economic Dictionary, Publishing House, Local Administration Press, Baghdad, 1977, p. 127

Production value index (sales value)

The value of production is one of the key indicators in all industries because it demonstrates the degree to which a product's quantity and value have developed. It is expressed with the following equation: The production value represents the direct cash revenue the factory obtains from its manufacturing process to produce the required products.

$$\text{Sales value} = \text{quantity of production} \times \text{price}$$

Table 3 displays the factory's sales figures for 2017 through 2021. While the sales value varied from 2574000000 dinars in 2017 to 3182400000 dinars in 2021, it is evident that the sales values fluctuated and were distributed unevenly throughout the study period due to lower production and lower selling prices, both of which harmed the number of sales realized. Sales grew in 2018 compared to 2017 by a sum equal to (2932800000) dinars, with a positive change rate of (13.94%). Our analysis reveals that sales fell in 2019 and reached a value of 252,7200,000 dinars, representing a negative annual change rate of (-13.83%).

And this is because inferior products with poorer quality and lower prices have displaced more expensive ones, leading to a decline in selling prices. Let's also remember the last quarter of 2019 and what the nation experienced. Another factor contributing to the drop in output and sales was the protests and the hostile environment. As for the year 2020, the year of depression due to the Corona crisis, and we touched on this a lot, sales decreased to reach (1510,600,000) dinars, with a negative annual rate of change (-40.23%), followed by the year 2021, the year of economic recovery and the pace of life. What Iraq witnessed from the reconstruction and construction campaign, we find all of that for him A positive impact on production and consumption, as the value of sales for the year 2021 reached about (3182400000) dinars, with a high positive annual change rate of about (110.67%) positive. Still, it needs to rise to the required level of sales and profits due to the sudden change in exchange rates and its impact on the prices of internal and external materials.

Table (3) *The value of sales achieved in the Muqarnas and Curbstone Factory for the period (2017-2021)*

The Year	Sales Value (Revenue)	Annual Change %
2017	2574000000	-
2018	2932800000	13.94
2019	2527200000	-13.83
2020	1510600000	-40.23
2021	3182400000	110.67

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

The data in Table 3 show that the Muqarnas and Curbstone Factory's sales value ranged from around (1510600000) dinars in 2020 to about (3182400000) dinars in 2021, with the latter year representing the factory's highest sales value.

Net Revenue Index

It is the difference between the total revenue less the tax—in this case, the tax is calculated at 15% of the business's value—and the net gain in the capital due to profitable commercial operations. Table (4) shows that the net revenue gradually increased at the beginning of the two study years (2018- 2017) from (2187900000) dinars to (2492880000) in a row, and in the two years (2019-2020), it recorded a decrease and in the negative, to return after that increase in 2021, recording a net revenue of (2705040000) dinars, as a result of the improvement of the country's conditions and the elimination of Corona restrictions.

Table (4) *The value of net revenue generated by the Muqarnas and Curbstone Factory (2017-2021)*

The year	Value of sales (revenue)	Amount of taxes (%15)	net income	the yearly rate of development
2017	2574000000	386100000	2187900000	-
2018	2932800000	439920000	2492880000	13.94
2019	2527200000	379080000	2148120000	-13.83
2020	1510600000	226590000	1284010000	-40.23
2021	3182400000	477360000	2705040000	110.67

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

According to Table 4's data, net revenue reached its highest positive percentage in 2021, when it reached (110.67%), while its lowest negative percentage was in 2020, when it reached (-40.23%). Net revenue also decreased in 2019 due to a negative annual rate of change of (-13.83%). The rate of change in 2018 was significant, reaching (13.94%) in favor.

Calculating the criteria for evaluating the efficiency of the economic performance of the Muqarnas and kerbstone factory in the city of Kut for the period (2017-2021)

First: Analysis and calculation of productivity evaluation criteria:

Analysis and calculation of the total productivity standard:

This indicator computes the production values attributable to the utilization of one unit of the production elements or one monetary unit of the values of the production elements. It measures the overall productivity of small businesses. The following is how it is stated: () Johannes Van Biesebroek, How tight is the link between wages and productivity? A literature survey, Conditions of Work and Employment Series No. 54, First published 2015, P7.

$$\text{Total productivity} = \text{value of production} / \text{total inputs}$$

The value of the outputs is greater than the value of the inputs (total production elements), which indicates that the economic unit is performing well. However, suppose the value of the inputs is greater than the value of the outputs. In that case, this indicates that the economic unit is performing poorly, so the economic unit should try to lower production costs as much as possible.

Through the data of Table (5), we find the total productivity of the production elements in the Muqarnas and Curbstone Factory for the period (2017-2021), as it was characterized by fluctuation. A decrease in production costs by a percentage less than the decrease achieved in the value of production; as for the year 2019, a slight decrease in total productivity is observed, amounting to a positive (1.05%), and in 2020 a decrease below zero in total productivity, reaching (0.92%), and one of the most important reasons for this was the Corona crisis and its consequences, the most important of which was the economic depression as a result of the closure (quarantined).

The end of the study period in 2021 saw a relatively small increase in total productivity of (0.98%), which was caused by the rise in production costs, which was primarily caused by the increase in the price of the drainage dam in Iraq, which went from 123,000 to 148,000 per \$100. In addition to the rise in salaries brought on by the high cost of living, this increased the value of all imported and domestic manufacturing requirements.

Table (5) *Standard of the total productivity of the Muqarnas and Curbstone Factory for the period (2017-2021)*

The year	output value (production value)	Input value (total inputs)	Value of the total productivity index
2017	2574000000	2492365000	1.03
2018	2932800000	2723340000	1.08
2019	2527200000	2401540000	1.05
2020	1510600000	1635900000	0.92
2021	3182400000	3248110000	0.98

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

It is noted from the data in Table (5) that the highest percentage of total production factor productivity was achieved in 2018, when it reached (1.08%), while the lowest percentage was in 2020, when it amounted to (0.92%).

Calculation and analysis of the partial productivity criterion:

It represents the relationship between the output of commodities produced during a certain period and the production elements. It can be expressed in the following formula ().

$$\text{Partial productivity} = \text{output} / \text{one component of the output}$$

Among the most important partial productivity criteria are the following:

Factor Productivity Standard

This indicator gauges the value of output generated by the employee and is determined by dividing the value of output by the total number of employees employed in the facility using the formula ():

$$\text{Factor productivity} = \text{production value} / \text{number of workers}$$

Muhammad Taqa and Hussein Ajlan, Labor Economics, Athraa for Publishing and Distribution, first edition, Amman, 2008, p. 163.) Johannes Van Biesebroeck, Op Cit, P7.

With the help of Table 6's data, it is evident that 2021 had the highest labor productivity percentage of all the studied years. However, we also note that this percentage fluctuated throughout the study period due to changes in the national economy. Additionally, the Corona crisis caused a disruption in everyone's lives, which decreased workplace productivity.

Table (6) Worker productivity standard for the Muqarnas and Curbstone Factory for the period (2017-2021)

The year	in terms of output	number of workers	employee productivity
2017	2574000000	30	85800000
2018	2932800000	31	94606451.61
2019	2527200000	29	87144827.29
2020	1510600000	27	55948148.15
2021	3182400000	29	109373931

Source: The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).

We can see from Table 6 that the highest rate for this criterion was (109,737,931) dinars in 2021, and the lowest value during the study period was (55,948,148.15) dinars. We also see that 2018 had the highest labor productivity, at (94,606,451.61) dinars, surpassing the previous year's rate of (85,800,000).

As it stood at (87,144,827.29) dinars in 2019, we can see that labor productivity has seen some growth compared to the number of workers. The growth in the workforce, which results in inadequate control and supervision, is the main cause of the deterioration, not to mention the topics and circumstances we covered from numerous angles.

Wage productivity criterion

This indicator is one of the main indicators for measuring partial productivity through the extent to which wages and salaries of workers contribute to the production of planned goods. It is calculated by dividing the value of production by wages and salaries, and it is calculated in the following formula: ()

$$\text{Wage productivity} = \text{production value} / \text{total wages and salary}$$

As shown by the data in Table 7, the wage productivity in the factory throughout the 2017–2021 period was characterized by variation. The value of this criterion was equal to 24.44 dinars in 2017, after which it gradually decreased to 21.28 dinars. Reaches (23.10) dinars in 2021, after which it will climb once more in 2020. This is because, throughout the 2017–2021 period, the rise in output value increased more quickly than the rate of wages and salaries.

) Johan Klaesson and Hanna Larsson, Wages, Productivity and Industry Composition–agglomeration economies in Swedish regions, CESIS Electronic Working Paper Series, Paper No. 203, 2009, P8.

Table (7) Wage Productivity Standard for the Muqarnas and Curbstone Factory for the period (2017-2021)

The year	in terms of output	Wages and salaries	wages produced
2017	2574000000	105300000	24.44
2018	2932800000	122400000	23.96
2019	2527200000	116100000	21.76
2020	1510600000	71000000	21.28
2021	3182400000	137760000	23.10

Source: The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).

It is noted from the data of Table (7) that the lowest value for this indicator was (21.28) dinars in 2020 and that the highest value for this indicator (wage productivity) was in 2017, when it recorded (24.44) dinars, as an increase in this percentage was evidence of The high productivity of wages and the extent of their contribution to the formation of production value.

The standard for measuring the productivity of raw materials is called the "raw material productivity standard," It is calculated by dividing the value of production by the value of the raw materials used in production. Raw material productivity is one of the indicators used to measure partial productivity. What follows demonstrates this:

$$\text{Raw material productivity} = \text{production value} / \text{value of materials used in production}$$

This percentage decreased to reach a value of (1.88) dinars in 2021 due to an increase in the value of local and imported raw materials as a result of the sudden rise in the exchange rate and Table 8's data, which shows that the productivity of raw materials in the factory for the period (2017-2021) has increased somewhat. This small increase indicates the efficiency of the factory in using raw materials as much as possible.

Table (8) *Productivity standard of raw materials for the Muqarnas and Curbstone Factory for the period (2017-2021)*

The year	in terms of output	Value of raw materials	Productivity of raw materials
2017	2574000000	1296000000	1.99
2018	2932800000	1383000000	2.12
2019	2527200000	1021500000	2.47
2020	1510600000	300960000	5.02
2021	3182400000	1689360000	1.88

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

The data in Table 8 show that the raw materials productivity index reached its highest value in the year 2020, when it was (5.02) dinars, as a result of the cheapness and availability of raw materials at the time and the decline in the value of production, and that it reached its lowest value in the year 2021, when it was (1.88) dinars, as a result of the increase in the use of raw materials in contrast to their high prices and scarcity.

Capital productivity criterion: This indicator shows the extent to which the monetary unit of the capital invested in the economic unit contributes to the formation of a certain amount of production to find capital productivity, as the value of production is divided by the value of capital, and it is calculated according to the following formula :

$$\text{Capital productivity} = \text{production value} / \text{invested capital}$$

Through the data of Table (9), it is clear to us that the capital productivity for the study period (2017-2022) was characterized by fluctuation between decrease and increase, and capital productivity for the year 2017 reached (2.36) dinars, then witnessed a slight increase by (2.41) in 2018 And the decline continued for the years 2019-2020, each recording a value of (2) dinars (1.21) dinars, respectively, and in 2021 the productivity of capital witnessed a positive development, as it recorded an increase in the value of capital productivity, as it amounted to (2.24) dinars, to clarify the fluctuation in Most of this criterion is affected by the economic situation of the country due to the lack of security and stability, worn out infrastructure, poor planning and inefficient management of the country.

Table (9) *Capital Productivity Standard for Muqarnas and Curbstone Factory (2017-2021)*

The year	in terms of output	value in capital	capital efficiency
2017	2574000000	1091065000	2.36
2018	2932800000	1217940000	2.41
2019	2527200000	1263940000	2
2020	1510600000	1263940000	1.21
2021	3182400000	1420990000	2.24

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

It is noted from the data of Table (9) that the highest value of the capital productivity criterion was achieved in 2018, when it amounted to (2.41) dinars, and that the lowest value for this criterion was for the year 2020, when it amounted to (1.21) dinars, to point out that the invested capital represents The economic sacrifice that pays for the formation and increase of the asset, if this sacrifice is matched by government financial support, administrative facilities, protection of the national product, tax reduction and the availability of infrastructure, as it is reflected in a positive impact on the industrial reality of the country.

Second: financial profit criterion:

After excluding the total costs paid within the production process from the total revenues received, we will get the profit, and it is calculated according to the following formula:

$$\text{Profit} = \text{Total Revenue} - \text{Total Costs}$$

Through the data of Table (10), it is clear to us that the Muqarnas and Curbstone Factory achieved profits for the period (2017-2021), and this is a good indicator of the factory's efficiency to increase the total revenues by a percentage greater than the total costs, and that the sales index in the factory was high throughout the period, despite The difficulties it faced, especially in the years (2019-2020), for reasons previously explained, and this good evaluation of the profit index is due to the factory's reliance on self-financing without resorting to borrowing, and its negative impact on revenues and high costs, in addition to that good management and planning of the factory and full know-how in terms of Availability of market and producer information.

Table (10) *Standard of financial profit for the Muqarnas and Kerbstone factory for the period (2017-2021)*

The year	gross income	total price	total price
2017	2574000000	2131120000	442880000
2018	2932800000	2362320000	570480000
2019	2527200000	2011560000	515640000
2020	1510600000	1184600000	326000000
2021	3182400000	2858300000	324100000

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

The financial profit reached the highest value for this criterion in 2018, reaching (570,480,000) dinars due to the increased revenues realized. On the other hand, the financial profit reached the lowest value for this criterion in 2021, reaching (324,100,000) dinars due to high production costs. Accordingly, the Muqarnas and Kerbstone factory is considered efficient in its performance to achieve profits by selling its products.

The criterion of the rate of return of one dinar

This criterion shows the ratio of the monetary unit's return to the spent (costs) in the factory's production process in achieving the corresponding revenues from the production process; as the value of this criterion is greater than the correct one, this means that the economic unit is safe and facilitating within its economic feasibility in the clearer sense, the dinar spent by the factory is recovered with a return on it, which the following formula can calculate:

The rate of return of one dinar = total revenue / total costs

Table (11) shows us the development of this criterion for the period (2017-2021), as the value of this criterion ranged (from 1.21) in 2017 and (to 1.11) in 2021.

Table (11) Standard rate of return of one dinar for the Muqarnas and Kerbstone factory (2017-2021))

The year	gross income	total costs	Dinar rate of return
2017	2574000000	2131120000	1.21
2018	2932800000	2362320000	1.24
2019	2527200000	2011560000	1.26
2020	1510600000	1184600000	1.28
2021	3182400000	2858300000	1.11

Source: The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).

It is noted from the data of TableTable (11) that the standard of return of one dinar recorded the highest value in 2020 when it reached (1.28); on the contrary, this benchmark achieved its lowest value in the year (2021), when it was 1.11. Thus, over the study period, it generated a higher return on the dinar than the appropriate one, making the factory commercially viable.

The criterion of the turnover of invested capital

This criterion measures how profitable the project will be and is determined using the formula below. The greater the capital turnover rate, the larger the percentage of invested capital in production and the value of production.

$$\text{Invested capital turnover} = \text{sales value} / \text{invested capital}$$

Table (12) shows us the amount of development for this criterion during the study period, as the value of this criterion ranged between (2.36) in 2017 and (2.24) in 2021.

Table (12) Standard of invested capital turnover for the Muqarnas and Curbstone Factory for the period (2017-2021)

The year	retail price	capital invested	rate of capital
2017	2574000000	1091065000	2.36
2018	2932800000	1217940000	2.41
2019	2527200000	1263940000	1.99
2020	1510600000	1263940000	1.19
2021	3182400000	1420990000	2.24

Source: The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).

As is noted from the data of Table (12), the highest value for this criterion was in 2018, when it reached (2.41); according to analogy, in 2020, this criterion recorded its lowest value, as it reached (1.19); we conclude from this and the indicators of the head cycles criterion Invested money. The factory has achieved a fluctuating increase in the value of this criterion throughout the study period (2017-2021), which indicates the efficiency of the factory in investing its money.

Standard rate of return on invested capital

This criterion is based on measuring the profitability of the economic unit, which is the primary objective pursued by all projects with various activities and serves as a measure of performance and investment efficiency. This criterion is calculated through the following formula:

$$\text{The rate of return on invested capital} = (\text{profit/invested capital}) * 100$$

From Table (13), we find that the values of this criterion for the period (2017-2021), with a positive sign as a result of the profits achieved and as a result of the increase in total revenues by a percentage greater than the realized increase in total costs, as the value of this criterion ranged between (40.60%) positive in 2017 and (2017). (22.81%) positive in 2021.

Table (13) *Standard rate of return on invested capital for the Muqarnas and Kerbstone factory for the period (2017-2021)*

The year	retail price	capital invested	rate of capital
2017	2574000000	1091065000	2.36
2018	2932800000	1217940000	2.41
2019	2527200000	1263940000	1.99
2020	1510600000	1263940000	1.19
2021	3182400000	1420990000	2.24

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

The statistics in Table 13 show that the criterion for the rate of return on invested capital reached its peak value in 2018, at 46.84 percent; however, the lowest value for this criterion was recorded in 2021, at 22.8 percent. We draw the unambitious conclusion that the Muqarnas and Kerbstone factory is technically viable and economically effective throughout the research period based on the reasonably high percentages of this criterion.

The degree of manufacturing standard

This indicator reflects the degree reached by the production unit in manufacturing the materials used in production, and the lower this percentage; indicates the financial degree of industrialization and vice versa and it is calculated according to the following formula:

$$\text{The degree of manufacturing} = (\text{the value of production requirements} / \text{the value of production}) * 100$$

From Table (14), it is clear that the degree of industrialization in the years 2017-2018 was rather high during the study period, reaching (4.66%) (and 4.67%), respectively. It began to decrease during the period 2019, and 2020 recorded as it reached (4.31%) (%) 3.15) respectively, but it increased again in 2021 and reached (4.44%), as a result of an increase in the use of production requirements and an increase in their prices.

The data in Table (14) show that the muqarnas and kerbstone factory met the standard for industrialization, recording a high level of industrialization in 2020 at a low rate, reaching (3.15%), and a low level of industrialization in 2018 at a high level, reaching (4.67%). We may therefore infer from those mentioned above that the plant can raise the value of its finished goods through rationing and effective utilization of production necessities.

Table (14) *The degree of industrialization of the Muqarnas and Curbstone Factory for the period (2017-2021)*

The year	profit	monetary investment	rate of return on invested % capital
2017	442880000	1091065000	40.60
2018	570480000	1217940000	46.84
2019	515640000	1263940000	40.81
2020	326000000	1263940000	25.80
2021	324100000	1420990000	22.81

Source: *Based on Tables (20) (23)*

Calculating and analyzing value-added criteria

Gross Value-Added Standard:

Add-added value is one of the key factors used to assess a production unit's effectiveness in using the resources at hand and its connection to the industrial economy.

Gross value added criterion = value of production - value of production inputs

Table (15) shows that the Muqarnas and Kerbstone factory's total added value fluctuated between (2454,180,000) dinars in 2017 and (304,122,0000) dinars in 2021 during the study period. Due to this, we note that the total added value could have been more stable during the study years. The absence of official support and efforts to sabotage the Iraqi economy made the nation dependent on imports, the most significant of the factory's many challenges and barriers.

Table (15) *Gross Value Added Standard for Muqarnas and Curbstone Factory for the period (2017-2021)*

The year	Value of inputs used in production	in terms of output	degree in Manufacturing
2017	119820000	2574000000	4.66
2018	136920000	2932800000	4.67
2019	108960000	2527200000	4.31
2020	47640000	1510600000	3.15
2021	141180000	3182400000	4.44

Source: *The financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021).*

OECD Manual, Measuring Productivity Measurement of Aggregate and Industry-Level Productivity Growth, 2001, P25.

According to statistics in Table (15), the Muqarnas and Curbstone Factory's total added value standard reached a value in 2021, reaching (304,122,0000) dinars, while it reached its lowest value in 2020, totaling (1462,960,000) dinars. Due to the Muqarnas and Curbstone Factory's level of economic effectiveness, the factory helps create some of the nation's income.

Net Value Added Standard:

It represents the total value after excluding the annual extinction and is calculated by the following formula ():

$$\text{Net value added} = \text{gross value added} - \text{depreciation}$$

The statistics in Table (15) show that the total added value standard for the Muqarnas and Curbstone Factory reached a value in 2021, reaching (304,122,0000) dinars, while it reached its lowest value in 2020, totaling (1462,960,000) dinars. As a result of the Muqarnas and Curbstone Factory's level of economic efficiency, the factory helps to some extent in creating national income.

Table (16) Value Added Standard for Muqarnas and Curbstone Factory (2017-2021)

The year	in terms of output	Value of inputs used in production	total value contributed
2017	2574000000	119820000	2454180000
2018	2932800000	136920000	2795880000
2019	2527200000	108960000	2418240000
2020	1510600000	47640000	1462960000
2021	3182400000	141180000	3041220000

Source: Column (1) based on the data of Table No. (34)

Column (2) based on the financial statements of the Muqarnas and Curbstone Factory for the period (2017-2021)

The net added value standard for the Muqarnas and Curbstone Factory peaked in 2021 at (2930,844,000 dinars), and it fell to its lowest level in 2020 at (1365,278,500 dinars), according to data in TableTable (16).

Conclusions

1. The Muqarnas and kerbstone factories in the city of Kut are currently operating below their designed capacity as a result of the lack of supply of energy and fuel sources by the state, and their high prices, which have led to many stoppages that occur in machinery and equipment.
2. The Muqarnas and Curbstone Factory contributed to providing the production of Muqarnas and Curbstone of good quality through modern machines and equipment of Turkish origin that operate electronically, which led to this product covering the needs of Wasit Governorate.
3. The results of the evaluation criteria for the Muqarnas and Curbstone Factory showed positive results for the period (2017-2021), as follows:
 - A The standard for the return of one dinar was greater than the correct one during the study period (2017-2021). This means that the dinar spent by the Muqarnas and Curbstone Factory is recovered with a return on it.
 - B- Except for 2020, the year of the Corona pandemic, we discovered that the criterion of invested capital turnover is high in most of the study period's years. This increase demonstrated the factory's capacity for financial success.
 - A- The results showed a decrease in the industrialization standard throughout the study period (2017-2021), as it recorded (4.66%) in 2017 and (4.44%) in 2021. This indicates that the degree of industrialization is high in the Muqarnas and Curbstone Factory.

- D The increase in the total added value when it reached (2,454,180,000) dinars in 2017 until it reached (3,041,220,000) dinars in 2021. Also, another piece of evidence shows the extent of the efficiency of the factory in using its available resources.

Recommendations

1. Establishing research, training and development centers, and activating the role of universities and institutes, by providing advice and technical and economic support to increase the level of efficiency of the performance of the construction industries.
2. Activating the Social Security Law and taking an active government oversight role on the activities of the private sector in the construction industry.
3. Adopting the method of a partnership between the public and private sectors of the construction industry through the establishment of companies and projects with joint capital.
4. A real development strategy for the building industry in Iraq would be created with serious government support, including providing infrastructure, particularly energy and power, at reduced prices and financial support through soft loans, customs rebates, and currency rate support.
5. Creating a competitive, model-integrated industrial city in the Wasit Governorate that is close to the sources of raw materials to advance the industrial growth and development process.

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