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RESEARCH ARTICLE – BUSINESS MANAGEMENT

Manufacturing Activities' Effects on Industrial Businesses' Performance

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Abstract

The research aims to test the impact of manufacturing activities (cost، quality، time، and flexibility) on organizational performance in Iraqi industrial companies. To achieve the research objectives، the descriptive and analytical approach was used by distributing a questionnaire form on the department managers unites officials. 65 questionnaire forms were distributed according to the purposive sample، and the response rate was (84.6%)، as the questionnaires suitable for statistical analysis amounted to (55) forms. SPSS program was used to build the model and analyze correlations between variables. The research reached a set of results، including the existence of significant correlations and influences between manufacturing activities and organizational performance.

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Keywords: Manufacturing activities، organizational performance، cost، flexibility، quality

1. Introduction

Contemporary organizations face a number of challenges, including increased competition, shorter product life cycles, and accelerated technological development. This has reinforced the importance of operations function in organizations as a source of competitive advantage. According to the resource-based view, operations have become a requirement in achieving sustainable competitive advantage as they are an important source of rare and valuable resources and capabilities that are difficult to imitate [1]. Which has led many companies to employ all available means to modify competitive priorities in pursuit of achieving survival and growth [2]. Therefore, companies must adapt to and understand the new circumstances in order to avoid performance deterioration and a decline in the quality of current or new products. Ultimately, failure to meet customer demands may lead to a reduction in the value of those companies' products in the market and their demise. Manufacturing is also not limited to creating products for use in factories, as is common. Manufacturing is viewed as crucial for a strong and prosperous economy because it generates income and maintains jobs in place. Consequently, manufacturing activities work on "combining all technologies and administrative procedures during the product lifecycle with the aim of maintaining its quality or restoring it to a state where it can perform its required function. The goal should also include improving production performance through proactive maintenance. Contemporary organizations must strive to maintain their competitive position by employing all strengths in the organization, and the organization cannot build a strategy to face the competitive environment in isolation from analyzing the available manufacturing capabilities. This is achieved by systematically reducing the need for maintenance interventions through improvements that extend the interval between maintenance or improve design, and must be substantial even for a small group of customers. Manufacturing activities, also known as "critical

dimensions that must be included in processes or supply chain to meet internal or external customer requirements, whether now or in the future," is "something that must be taken into account." [3].

2. Research methodology;

2.1 Research Problem

The study problem is represented by the lack of previous studies addressing the relationship between manufacturing activities and organizational performance, especially in Iraq. It can be highlighted through the following questions
1. What is the level of interest in manufacturing activities and organizational performance in the industrial companies under study?
2. Is there a statistically significant relationship between manufacturing activities and organizational performance in the companies under study?
3. What is the impact of manufacturing activities on organizational performance in the industrial companies under study?

2.2 Research Importance;

1. Shedding light on the correlational relationships between manufacturing activities and organizational performance in industrial companies, namely (The General Company for Automotive and Equipment Industry, Light Industries Company for Electrical Appliances, General Company for Grain Trade, Pioneer Pharmaceutical Industries Company), in order to attract and stimulate the interest of leaders and decision makers in these companies to focus on improvement activities and their role in enhancing organizational performance for the purpose of gaining customers. 2. Bridging the gap left by the scarcity of research on the subject of how manufacturing activities affect organizational performance, specifically in Iraq.

2.3 Research Objectives.

The study aims to achieve the following objectives:
1. Determine the level of manufacturing activities and organizational performance in the industrial companies under study.
2. Test and examine the correlational relationship between manufacturing activities and organizational performance.
3. Test the impact of manufacturing systems on organizational performance.

2.4 Research Hypothesis

Based on the research questions and objectives, the following hypotheses were formulate
First: The first main hypothesis: There is a statistically significant correlation between manufacturing activities and organizational performance in the industrial companies under study. This branches into:
1. There is a statistically significant correlation between cost and organizational performance
2. There is a statistically significant correlation between quality and organizational performance
3. There is a statistically significant correlation between time and organizational performance
4. There is a statistically significant correlation between flexibility and organizational performance
Second: The second main hypothesis: There is a significant effect of manufacturing activities on organizational performance, and it branches into:
1. There is a significant effect of the cost dimension on organizational performance
2. There is a significant effect of the quality dimension on organizational performance
3. There is a significant effect of the time dimension on organizational performance
4. There is a significant effect of the flexibility dimension on organizational performance

2.5 The hypothetical research model:

The researchers worked on developing a hypothetical model as illustrated in Figure (1).

Fig. 1. Conceptual framework for research hypotheses

2.6 Research Methodology

The research used the descriptive and analytical approach for the purpose of identifying the research problem and framing its dimensions. The descriptive approach is used to describe the reality of the studied variables, while the analytical approach is used to test theories by examining the causal relationships between variables, meaning the relationship and effect, through statistical methods using a questionnaire form for data collection.

2.7 Research Limitations

- Temporal limits: Represented by the duration of completing the practical aspect of the research, which extended from (5/1/2023) to (25/3/2023).
- Spatial limits: Represented by Iraqi industrial companies (public industrial companies affiliated with the Ministry of Industry, Trade, and Health).
- Scientific limits: Represented by the study variables between manufacturing activities and organizational performance.

2.8 Data collection methods

1- Books, journals, and university theses for building the theoretical part of the research.

2- Questionnaire: It is considered the main tool for obtaining data related to the field aspect of the research. It was developed to suit the research objectives and the environment under study. It included manufacturing activities based on the scale of [4] (cost 8 items, quality 7 items, time 5 items, and flexibility 6 items). As for organizational performance, it included 10 items based on the scale of [5]. The questionnaire was designed according to the five-point Likert scale, which includes (5) levels, the lowest being (1) (strongly disagree), (2) (disagree), (3) (neutral), (4) (agree), (5) (strongly agree), to determine the respondents' opinions on the research variables.

2.9. Statistical Methods

The study data were analyzed using SPSS statistical software as follows [6]:
1. Arithmetic mean: To determine the level of responses of the sample individuals to the study variables.
2. Standard deviation: To measure dispersion and determine deviations of the average responses from their arithmetic mean.
3. Coefficient of variation: It is the ratio of standard deviation to the mean, used to determine the dispersion for different data groups.
4. Relative importance: To know the importance of each item within the variable items.
5. Reliability coefficient (Cronbach's alpha): To identify the stability of questionnaire items over consecutive time periods.
6. Pearson correlation coefficient: To determine the type of relationship between study variables and their dimensions according to their strength and direction.
7. Simple linear regression: To measure the impact of independent variables on the dependent variable.

2.10. Research Community and Sample

- Study population (General Company for Automobile and Equipment Industry, Light Industries Company for Electrical Appliances, General Company for Grain Trade, Pioneer Company for Pharmaceutical Industries).
- Research sample (Department managers from the above companies). Questionnaires were distributed, totaling 30 forms, of which 21 were valid (70%) and 11 were invalid (30%) as shown in the statistical analysis.

3. Literature review

3.1 Manufacturing activities / Concept of manufacturing activities

Manufacturing activities is a term that emerged in the literature within a family of terms indicating a single concept related to the methods or activities that an organization chooses to compete in the market. These terms included: competitive priorities, organizational priorities, competitive capabilities, and content variables, dimensions of competition, core content, manufacturing tasks, and winner and qualifier criteria. These studies have been utilized to develop hypotheses and measure variables for the current study. Hayes was the first to introduce the term competitive priorities, synonymous with manufacturing activities, in 1984; he defined it as "the strategic preferences or ways that an organization chooses to compete in the market." The term manufacturing activities has been classified in different ways by many authors, as it is widely used in the study of manufacturing strategy to refer to two objectives, namely quality and delivery time. A model can be identified that represents the relationship between it and marketing opportunity activities and establishes a specific structure for it, as shown in Figure [2].

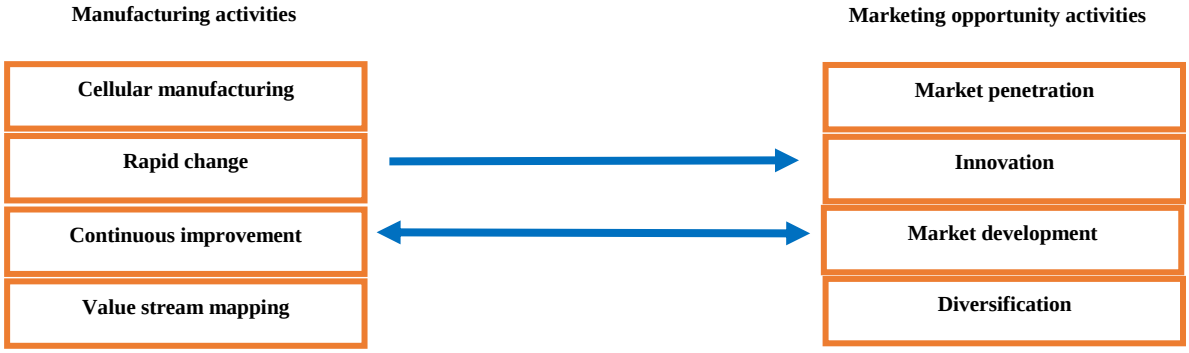

Figure (2) Marketing activities and marketing opportunities [1]

Some others consider that this word includes low cost, flexibility, quality, delivery, or reliability to symbolize the four basic components of manufacturing processes, with innovation included as a fifth means as it gradually began to attract more attention [7]. Some researchers have also used a representation of six criteria for manufacturing activities. These criteria were: (1) Quality, (2) Cost, (3) Time, (4) Flexibility, (5) Customer concerns as the main focus, and (6) Knowledge.

In order to emphasize the independence of each competitive goal from the others, some researchers violated the structure with dimensions or many components of industrial processes by integrating new aspects such as innovation and human resources among other dimensions. The four factors or basic chemicals that make up the classification frequently used to express manufacturing processes are as follows:

- **Quality**: There are several ways to define quality, as follows:

- Product: Displays attributes or characteristics of durability, reliability, endurance, and robustness in this product.
- End consumer: Meets user preferences in the product or service they request according to what is expected from the product or in satisfying or pleasing the chooser at a reasonable price.
- Manufacturing is low-cost compliance with standards and specifications.
- "The changing state of products, processes, people, and environment that meet or exceed customer expectations" [8] is how quality is defined.

- **Cost:** Most manufacturing organizations in particular recognize cost management, as it is a critical activity through which companies aim to offer their products at lower prices than competitors and achieve the highest possible profits. The organization will have the upper hand in the market and be in a distinguished position to control the market and have the ability to deter new entrants if it is able to control its expenses and make them the lowest percentage compared to competitors in the same industry. For the customer, who is often very price-conscious and will always choose the lowest prices - always providing quality - differentiation through low costs is a clear advantage.

- **Time:** On-time delivery is considered one of the main components for meeting customer needs. In addition to on-time delivery, customers also expect quick delivery. Therefore, delivery speed is one of the vital production measures that can help the company secure contracts. Time plays a key role in companies because product life is limited, and thus time is a source for achieving organizational performance, especially when introducing new products. The rapid cycle of product development and manufacturing is crucial for gaining a competitive advantage over competitors in the current highly competitive environment. Time can be expressed using [9]:

1) - Delivery speed: This refers to how quickly the company can produce the required goods and satisfy customers.

2) Speed of new product development: The speed of introducing new products and innovations. Organizational performance based on delivery achieves the following advantages:

- Introducing new products faster than competitors, which means achieving a distinguished position for the product or brand in the customer's mind?
- Reducing inventory to a minimum and increasing flexibility in responding to customer demands.

- **Flexibility**: Customers in the harsh manufacturing environment seek flexibility in addition to high quality and low prices. Flexibility is described as the ability to quickly respond to changes in consumer demand and provide services faster while meeting customer expectations. It also refers to the adaptability of the production system in light of the organization's ability to adapt to changes in product design resulting from changing consumer tastes and technological advancements related to modifying the quantity or type of production. Regarding volume flexibility, this is manifested in the ability to change the volume of production, either by increase or decrease, in response to shifts in demand quantity. Five different types of flexibility advantages can be mentioned:

- The flexibility of an industrial material handling system is measured by its ability to transfer different types of functions between two nearby locations.
- Production flexibility, which evaluates the product according to this measure and shows the system's ability to create goods with a range of features.
- Operational flexibility measures the ability to change the order in which operations must be performed to produce a good.
- Equipment flexibility assesses the system's ability to perform different tasks without changing the way production is organized.
- Labour flexibility: This measure assesses the worker's ability to create different tasks.

3.1.2 Flexible Manufacturing System (FMS):

A flexible production system is a system consisting of a group of work stations, usually computer numerically controlled machines, interconnected with each other. It consists of three subsystems:
- Management: Includes devices, computers, and information systems that perform calculations and coordinate between different operations.
- Production: Consists of manufacturing machines that perform various manufacturing processes.
- Handling: Aims to automatically transfer parts from one machine to another and from one stage to another.

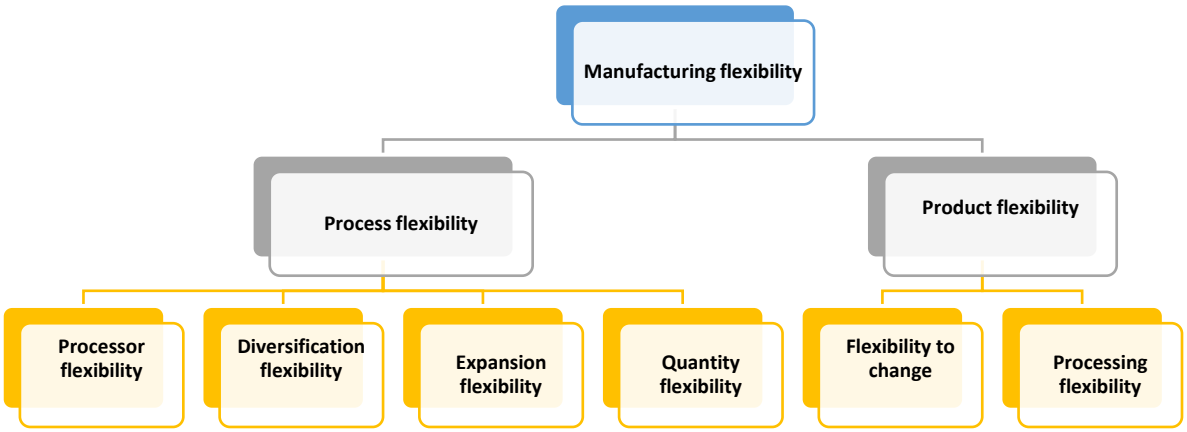

Fig. 3. Flexible Manufacturing System

3.1.3. Manufacturing Activities (in terms of trade-offs):

The relationship between industrial processes has changed from a reciprocal or independent relationship, where one does not affect the other, to a cumulative or interactive relationship. Reducing defective and damaged goods. However, this relationship is not always true, as a higher quality product does not always mean better value, but a moderate quality product may be the best value. Cost reduction programs also become more effective when there is good quality, effective delivery, and better flexibility. [10].

The fact that the tax system placed additional responsibilities on this poor class led many of them to leave for their countries of origin, especially when domestic work as a means of earning extra money was not sufficient to meet the demands of this "large" family. The young, along with large landowners, had to choose between obtaining loans and earning a living or leaving the country and seeking security in the city; they chose the latter. This happened at the same time when labor was freed from all restrictions and all labor unions were abolished, allowing everyone to pursue any field of work as long as they complied with regulatory rules [11].

Preventive and Corrective Maintenance: Maintenance is carried out on equipment asset items. Maintenance procedures are either preventive or corrective and are classified in the terminology standard as shown in Figure (4s).

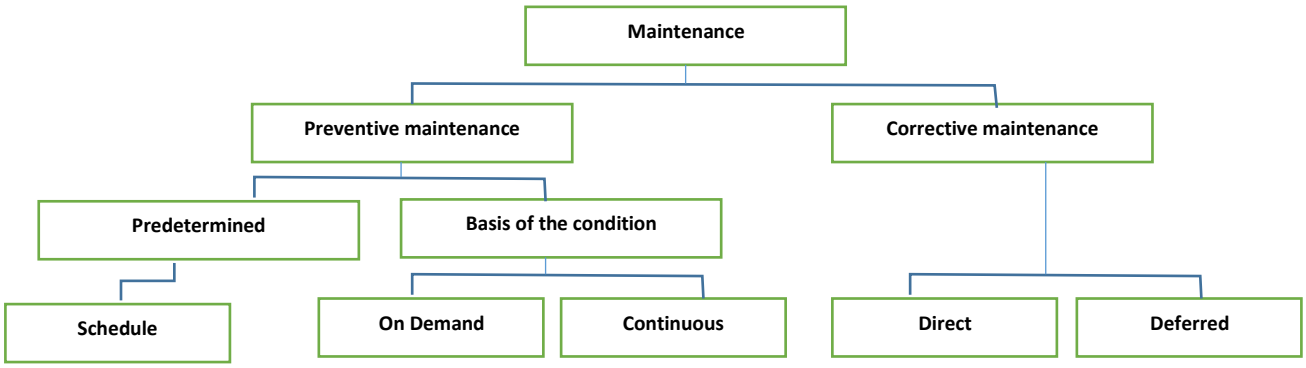

Figure (4): An overview of maintenance [9]

Corrective Maintenance (CM), which is maintenance performed after a malfunction or inefficiency occurs, and Preventive Maintenance (PM), which is maintenance performed before a failure occurs, are the two types of maintenance. Regardless of how well PM is performed, CM is necessary as a backup in case of unexpected failures that are predetermined.

Maintenance is PM, which performs scheduled tasks at regular intervals based on the number of units produced, processing time, or calendar time. Condition-Based Maintenance (CBM) is PM that is initiated based on equipment condition; it can be done continuously, on-demand, or on a planned basis with a specific time period. If an item is scheduled for replacement for repair because it is considered to be in poor condition, whether scheduled or requested, CBM employs continuous sensors to detect product deterioration before it leads to failure.

Deferred Maintenance (CM) is CM that can be partially addressed at the present time with the actual replacement of the item postponed until the next available planned maintenance period. Immediate Maintenance (CM) is CM that must be performed immediately to maintain the equipment. Practical application is not as simple as the standard. For example, due to organizational custom and lack of IT support, a task that is best presented using a predetermined time interval PM using equipment processing time may instead use a specific time duration. In this case, finding the necessary technical support may be simple, but usually properly scheduling activities has a greater impact on the maintenance plan that is actually implemented. The classification of maintenance work performed to track completed work may benefit from the traditional division into PM and CM. However, due to the margin of error in uncertainty for certain elements, there will always be a discrepancy between the intended PM work and the actual output. Furthermore, maintenance may not always be accurate, and the problem of unplanned events is not solved simply by classifying anything as "PM". As a result, it is important to research the maintenance cost for each item and apply its optimal maintenance duration, which should be regularly evaluated due to changing work conditions.

3.2 Organizational Performance of Industrial Institutions

Organizational performance refers to the level at which a company achieves its financial and commercial goals. There are many ways to evaluate a company's performance. A company's performance can be evaluated based on four different factors. These criteria relate to markets, goods, economic outputs, and employees. According to the proposed model, performance will be evaluated based on the company's economic production results, or more specifically, financial performance. This classification of performance is somewhat broad. In previous research, several authors evaluated the performance of institutions using financial and market indicators, such as Return on Assets (ROA), Return on Investment (ROI), market share, sales margin, and growth in return on investment, revenues, market share, and overall competitive position. This measure, which expresses the relationship between profits and the amount of money available to management regardless of how assets are financed, is one of the most frequently used measures in finance. It is one of the measures used to assess management's ability to generate profits from each given dollar (3). There are two factors that determine the Return on Assets (ROA) indicator:

3.2.1. Profit margin: which measures the effectiveness of cost management and control [14]

3.2.2. Asset Utility:
Also known as asset utilization, this indicator demonstrates the best use of assets, i.e., productivity. The following relationship is used to calculate the profit margin:

Profit margin = Total revenue divided by net profit after taxes and interest.
The following relationship serves as a measure of asset utility:
Total revenue / Total assets = Asset utility.
As a result, the return on assets is calculated as follows: Profit margin × Asset utility.
That is:

Return on Assets = (Net profit after interest and taxes) / (Total assets) [15].

4. The Practical Aspect

4.1 Overview of the research community and its sample

The research was applied in a group of industrial companies, namely (The General Company for Automotive and Equipment Industry, Light Industries Company for Electrical Appliances, General Company for Grain Trade, Pioneer Company for Pharmaceutical Industries). As for the research sample, it consisted of department managers and section heads in the above-mentioned companies through the use of a purposive sample due to their experience in the field of industry and thus accuracy in answering the questionnaire items. 65 questionnaires were distributed, and the response rate was (84%), as the number of valid questionnaires for statistical analysis reached (55) questionnaires.

4.2. Statistical Analysis

4.2.1. Validity and Reliability Measurement

The questionnaire was presented to a group of reviewers to verify face validity. Their opinions were taken into account, inappropriate items were excluded, and some items were rephrased to suit the Iraqi environment. Additionally, Cronbach's alpha coefficient for internal consistency was calculated for the questionnaire items, which should exceed (0.70) [6]. The alpha value for manufacturing activities was (0.89), and for organizational performance (0.84). It is noted that the coefficients for all variables are high and suitable for analysis purposes.

4.2.2. Descriptive Analysis of Study Variables

First: Descriptive Analysis of Manufacturing Activities Variables. Table (1) shows the results of the descriptive statistical analysis for the manufacturing activities variable as follows:

Table (1) Ranking of relative importance of manufacturing activities dimensions

Rank level	Relative importance	Coefficient of variation	Standard deviation	Mean	Dimension
Third	66.70	26.92	0.898	3.335	**cost**
second	67.80	25.78	0.874	3.390	**quality**
fourth	66.22	23.22	0.769	3.311	**Time**
first	69.56	20.18	0.702	3.478	**Flexibility**
---	**70.28**	**20.17**	**0.709**	**3.514**	**Manufacturing Activities**

Source: Prepared by the researchers based on SPSS program

Table (1) shows that manufacturing activities achieved an arithmetic mean of (3.514), which is higher than the hypothetical mean of (3) and is considered high, with a level of importance of (70.28%) and a standard deviation of (0.709), with a coefficient of variation of (20.17%). This indicates accuracy in the responses and limited dispersion.

At the dimension level, the (flexibility) dimension ranked first, as it achieved the highest arithmetic mean of (3.478), with a standard deviation of (0.702), a coefficient of variation of (20.18%), and a relative importance of (69.56%). The (quality) dimension came in second place with an arithmetic mean of (3.390), a standard deviation of (0.874), a coefficient of variation of (25.78%), and a relative importance of (67.80%). Then the (cost) dimension ranked third, with an arithmetic mean of (3.335), a deviation of (0.898), a coefficient of variation of (26.92%), and a relative importance of (66.70%). Finally, the (time) dimension came in last place with an arithmetic mean of (3.311), a standard deviation of (0.769), a coefficient of variation of (23.22%), and a relative importance of (66.22%).

Second: Descriptive Analysis of Organizational Performance

Table (2) shows that performance achieved an arithmetic mean of (3.345), which is higher than the hypothetical mean of (3) and is considered high, with an importance level of (66.80%) and a standard deviation of (0.899), with a coefficient of variation of (26.87%). This indicates accuracy in the responses and limited dispersion.

Table (2) Descriptive Analysis of Organizational Performance

Relative importance	Coefficient of variation	Standard deviation	Mean	Dependent variable
66.80	26.87	0.899	3.345	Organizational Performance

Source: Prepared by the researchers based on SPSS program

4.2.3. Testing Research Hypotheses

The research hypotheses were tested at the correlation level using Pearson's correlation coefficient:

The First Main Hypothesis: There is a significant correlation between manufacturing activities and organizational performance.

Table (3) shows the nature of the correlation relationships between manufacturing activities and organizational performance:

Table (3) Correlation coefficients between manufacturing activities and organizational performance

Level of significance	Business Performance	dependent variable / independent variable
0.00	0.572*	**Cost**
000	0.654*	**Quality**
0.00	0.404*	**Time**
0.00	0.732*	**Flexibility**
0.00	0.539*	**Manufacturing Activities**

Source: Prepared by the researchers based on SPSS program

From the results of Table (3), it is evident that there is a significant correlation relationship between manufacturing activities and organizational performance, as the correlation coefficient value recorded (0.539), which is a relatively high positive value and statistically significant at the level of (0.05). Therefore, the first main hypothesis has been verified. As for the sub-hypotheses, they were as follows:

1. The results of the correlation analysis in Table (3) indicate the presence of a significant correlation between the cost dimension and organizational performance. The correlation coefficient recorded a value of (0.572), which is a relatively high positive value and statistically significant. The significance level (P) had a low value and was smaller than the required limits, which stipulate that it should be less than (0.05). This indicates the validation of the first sub-hypothesis, which states that "there is a significant correlation between the cost dimension and organizational performance."
2. The results of the correlation analysis in Table (3) indicate the presence of a significant correlation between the quality dimension and organizational performance, as the correlation coefficient value recorded (0.654), which is a relatively high positive value and statistically significant. The significance level (P) value was low and smaller than the required limits, which stipulate that it should be less than (0.05). This indicates the verification of the second sub-hypothesis, which states that "there is a significant correlation between the quality dimension and organizational performance."
3. The results of correlation analysis in Table (3) indicate a significant correlation between the time dimension and organizational performance, with a correlation coefficient value of (0.404), which is a relatively high positive value and statistically significant. The significance level (P) value was low and smaller than the required threshold of (0.05), which indicates the validation of the third sub-hypothesis stating that "There is a significant correlation between the time dimension and organizational performance."
4. The results of the correlation analysis in Table (3) indicate a significant correlation between the flexibility dimension and organizational performance, with a correlation coefficient value of (0.732), which is a relatively high positive value and statistically significant. The significance level (P) value was low and smaller than the required limits, which stipulate that it should be less than (0.05). This indicates the validation of the fourth sub-hypothesis, which states (There is a significant correlation between the flexibility dimension and organizational performance).

The second main hypothesis: There is a statistically significant correlation between manufacturing activities and organizational performance.

This hypothesis and its branches were tested by adopting the regression coefficient symbolized by (β), as it explains the proportion of the influence of the independent variable/dimension on the dependent variable. In addition, the coefficient (R2) was extracted, which shows the proportion of variance in the dependent variable that can be predicted through the independent variable and its dimensions.

To accept the hypothesis, the calculated (T) value must be greater than its tabulated counterpart of (1.658) at a significance level of (0.05), i.e., at a confidence level of (95%). Similarly, the calculated (F) value must be greater than its tabulated counterpart of (3.92) at a significance level of (0.05), i.e., at a confidence level of (95%) according to approved statistical tables [6]. Table (4) presents the test results for the second main research hypothesis.

Table (4) the impact of manufacturing activities on organizational performance

Level	Sign	Calculated F-value	Calculated T-value	Regression coefficient (effect)	Coefficient (R^2)	DV	Dimensions of manufacturing activities
Third	**0.000**	**8.318**	**5.724**	**0.398**	**0.476**	**Business performance**	**Cost**
Second	**0.003**	**10.366**	**7.743**	**0.412**	**0.521**		**Quality**
Fourth	**0.000**	**8.256**	**4.838**	**0.314**	**0.206**		**Time**
First	**0.000**	**15.836**	**8.670**	**0.422**	**0.542**		**Flexibility**
	0.000	**12.533**	**6.455**	**0.408**	**0.316**		**Manufacturing Activities**

Source: Prepared by the researchers based on SPSS program

Table (4) indicates that the coefficient of determination (R2) was (0.316), and this result indicates that the manufacturing activities variable explains (31.6%) of the variance in the organizational performance variable, while the remaining percentage (68.4%) is due to other factors not included in the practical scheme of the current research. Meanwhile, the regression coefficient was (0.408), which indicates that a change in the manufacturing activities variable of companies by one unit will be reflected in the organizational performance variable by (40.8%) based on the simple linear regression equation (Y=a+bX), where (Y) represents the dependent variable while (X) represents the independent variable. On the other hand, the calculated T-value was (6.455), which is greater than its tabulated counterpart estimated at (1.658) at a significance level of (0.05), i.e., at a confidence level of (95%). Also, the calculated F-value was (12.533) with a significance level of (0.000), which is greater than its tabulated counterpart (3.92) at a significance level of (0.05), i.e., at a confidence level of (95%). In light of these results, the second main hypothesis, which stated that (there is a significant effect of manufacturing activities on organizational performance), is accepted. In the same field, Table (4) presents the results of testing the sub-hypotheses related to the second main hypothesis, as follows:

1. The dimension of (cost) achieved a coefficient of determination (R2) of (0.476), indicating that this dimension explains (47.6%) of the variance in the organizational performance variable. The remaining (52.4%) is attributed to other factors not included in the current research's practical plan. The regression coefficient (β) reached (0.398), indicating that a change in the cost dimension by one unit will be reflected in the organizational performance variable by (39.8%). In contrast, the calculated T-value was (5.724), which is greater than its tabular counterpart estimated at (1.658) at a significance level of (0.05), i.e., with a confidence level of (95%). The calculated F-value was (8.318) with a significance level of (0.000), which is greater than its tabular counterpart of (3.92) at a significance level of (0.05), i.e., with a confidence level of (95%). In light of these results, the first sub-hypothesis of the second main hypothesis is accepted, which stated that (there is a significant effect of the cost dimension on the organizational performance variable).
2. The dimension of (quality) achieved a coefficient of determination (R2) of (0.521), and this percentage indicates that this dimension explains (52.1%) of the variance in the organizational performance variable. The remaining percentage of (47.9%) is due to other factors not included in the practical scheme of the current research. Meanwhile, the regression coefficient (β) reached (0.412), which indicates that a change in the quality dimension by one unit will be reflected in the organizational performance variable by (41.2%). In contrast, the calculated T-value reached (7.743), which is greater than its tabulated counterpart estimated at (1.658) at a significance level of (0.05), i.e., at a confidence level of (95%). The calculated F-value reached (10.366) with a significance level of (0.000), which is greater than its tabulated counterpart of (3.92) at a significance level of (0.05), i.e., at a confidence level of (95%). In light of these results, the second sub-hypothesis of the second main hypothesis is accepted, which stated that (there is a significant effect of the quality dimension on the organizational performance variable).
3. The time dimension achieved a coefficient of determination (R2) of 0.206, which indicates that this dimension explains 20.6% of the variance in the organizational performance variable. The remaining 79.4% is attributed to other factors not included in the practical scheme of the current research. The regression coefficient (β) reached 0.314, indicating that a change in the time dimension by one unit will be reflected in the organizational performance variable by 31.4%. In contrast, the calculated T-value was 8.670, which is greater than its tabular counterpart estimated at 1.658 at a significance level of 0.05, i.e., with a confidence level of 95%. The calculated F-value was 8.256 with a significance level of 0.000, which is greater than its tabular counterpart of 3.92 at a significance level of 0.05, i.e., with a confidence level of 95%. In light of these results, the third sub-hypothesis of the second main hypothesis is accepted, which stated that "there is a significant effect of the time dimension on the organizational performance variable."
4. The dimension of (flexibility) achieved a coefficient of determination (R2) of (0.542), and this percentage indicates that this dimension explains (54.2%) of the variance in the organizational performance variable. The remaining percentage of (45.8%) is due to other factors not included in the practical scheme of the current research. Meanwhile, the regression coefficient (β) reached (0.422), which indicates that a change in the time dimension by one unit will be reflected in the organizational performance variable by (48.38%). On the other hand, the calculated T-value reached (4.838), which is greater than its tabular counterpart estimated at (1.658) at a significance level of (0.05), i.e., at a confidence level of (95%). The calculated F-value reached (15.836) with a significance level of (0.000), which is greater than its tabular counterpart of (3.92) at a significance level of (0.05), i.e., at a confidence level of (95%). In light of these results, the

fourth sub-hypothesis of the second main hypothesis is accepted, which stated that (there is a significant effect of the flexibility dimension on the organizational performance variable).

Through Table (4), it can be said that the dimension with the greatest impact on the organizational performance variable compared to other dimensions is the (flexibility) dimension. The (quality) dimension came in second place. The (cost) dimension came in third place. Finally, the (time) dimension came in fourth and last place.

5. Conclusions:

1. The results of the study showed that the contributing industrial institutions focus on all dimensions of manufacturing strategy, represented in quality, cost, delivery, and flexibility, to a degree ranging from medium to high.
2. The existence of a significant positive correlation between manufacturing activities and their dimensions (cost, quality, time, and flexibility) and organizational performance in Iraqi industrial companies. This means that the organizational performance of these companies depends on the presence of manufacturing activities as essential organizational resources.
3. The existence of a significant impact of all dimensions of manufacturing activities on organizational performance. It was found that the flexibility dimension is the most influential aspect of manufacturing activities on organizational performance, followed by quality, then cost, and finally time [16].
4. That business strategy has modified the impact of manufacturing strategy on organizational performance in terms of flexibility dimension, as the results showed that the impact was higher for companies adopting a differentiation strategy than for companies adopting a cost leadership strategy.

6. Recommendations:

1. Starting to approach the framework using broader domains, and since there is an impact of distribution on institutional performance and no differences according to business strategy, we recommend implementing a material requirements planning system that contributes to delivering orders at appropriate times and in appropriate quantities. We also recommend working on developing the transportation fleet of industrial companies or contracting with service companies to perform this task or allying with neighboring companies to reduce development costs [17].
2. It is likely to follow the common pattern of accelerated growth, and there will be a natural development of more advanced virtual tools, so we recommend working on training employees and providing them with multiple skills, and applying production technology such as computer numerical control machines, as well as emphasizing the importance of increasing the creative capabilities of organizations with the aim of developing new ideas.
3. Conducting future studies concerned with examining the impact of the work environment on manufacturing strategy and manufacturing activities, as well as studying the effect of production technology in modifying the relationship between manufacturing strategy and institutional performance.

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