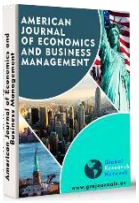

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Article

The Role of Sustainable Manufacturing in Reducing Strategic Drift an Analytical Study of The Opinions of Employees at Etihad Food Industries Company Limited

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Abstract: Today's customers are no longer satisfied with merely obtaining affordable, high quality products. They have also become increasingly concerned with social and environmental issues, which are a consequence of production systems that rely heavily on the depletion of natural resources. Therefore, the most prominent challenge for contemporary industrial organizations has become the need to adopt sustainable manufacturing initiatives to enhance social responsibility toward the environment and its resources, thus contributing to countering strategic drift. This research aims to analyze the role of sustainable manufacturing in reducing strategic drift in a Sample of workers in the Etihad Food Industries Company Limited in Babylon Governorate. Its importance lies in the scarcity of research that addressed sustainable manufacturing and its role in avoiding strategic drift. This research is considered one of the first studies that address a real current problem affecting industrial organizations , which is strategic drift. A questionnaire was used to collect information from employees in the company under study. The results of the research sample revealed a positive correlation between most of the dimensions of sustainable manufacturing and the dimensions of strategic drift. This means that strategic drift decreases as the company's interest in sustainable manufacturing increases, especially green materials and advanced technology techniques. Among the research proposals is the necessity for the company's senior management to instill organizational cultural values in its employees, which would consolidate the principles of work mastery, self-development, and the ability to manage production processes efficiently and effectively.

Keywords: Sustainable Manufacturing, Strategic Drift, Etihad Food Industries Limited

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1. Introduction

Industrial organizations, regardless of their nature and size, and many challenges resulting from the environment changing environment and the sudden shifts brought about by environmental changes. However, most companies today suffer from a gap between current manufacturing and sustainable manufacturing due to the absence of strategic drift, which entails limited study of the external environment and a lack of strategic planning [1], [2]. This is an indicator that warns of the failure of managements to develop appropriate strategic plans, and accordingly requires companies to find solutions and methods that address drift and avoid it in the future in order to achieve the best results to reach the strategic goals that the organization seeks to achieve [3]. Therefore, many industrial companies today have rushed to resort to sustainable manufacturing in order to bring about change and limit the features of strategic drift and achieve the

required goals. Therefore, the research came to shed light on a vital and important topic, which is the impact of sustainable manufacturing in reducing strategic drift through four topics [4], [5], [6]. The first topic was concerned with the research methodology, while the second focused on the theoretical aspect of sustainable manufacturing and strategic drift. The third topic was concerned with clarifying the research results and testing hypotheses, while the fourth topic included conclusions and recommendations.

2. Materials and Methods

First: The Research Problem

The research problem is the extent to which sustainable manufacturing systems are applied in industrial companies to mitigate strategic drift. Sustainable manufacturing occupies a significant position in enhancing industrial companies' ability to respond to environmental changes and strive to achieve a sustainable industrial revolution through integration of the main directions of the organizations' expected goals and objectives. It plays a prominent role in industrial companies' ability to bridge the gap between current manufacturing and their current practices. Sustainable manufacturing and keeping abreast of the latest environmental developments, thus reducing the problem of strategic drift in various operations, thus the research problem emerged in answering the following questions:

1. To what extent do the respondents respond to and understand the concept of sustainable manufacturing and its dimensions in the Etihad Food Industries Company Limited?
2. To what extent do the respondents respond to and understand the concept of strategic drift and its dimensions in the Etihad Food Industries Company Limited?

Second: Importance of the Research

1. Providing additional knowledge on the research topic, which is characterized by its novelty, importance, and limited research.
2. Consolidating the convictions of senior management at the industrial company under study regarding the importance of sustainable manufacturing as a key input into production processes and monitoring them to achieve the company's goals of reducing strategic drift in product offerings.
3. The research results will assist decision-makers in the industrial company by providing information that helps management compare available alternatives to achieve sustainable manufacturing.
4. The importance of the research lies in the importance of the industrial company under study as one of the active industrial companies that plays an effective role in achieving sustainable economic development plans in the country.

Third: Research Objectives

1. To identify the degree of availability of sustainable manufacturing dimensions and the level of strategic drift in the industrial Industrial organization.
2. To explain the nature of the impact of sustainable manufacturing dimensions on mitigating strategic drift.
3. Explaining the relationship between the dimensions of sustainable manufacturing and the dimensions of strategic drift.

Fourth: Hypotheses and Hypothetical Research Plan

In light of the problem and to achieve the study's objectives and reach the desired results, two main hypotheses were adopted and formulated as follows:

1. We expect a correlation to emerge between sustainable manufacturing in its dimensions and strategic drift in its dimensions.
2. We expect sustainable manufacturing in its dimensions to have an impact on reducing strategic drift in its dimensions, see Figure 1.

3. Results and Discussion

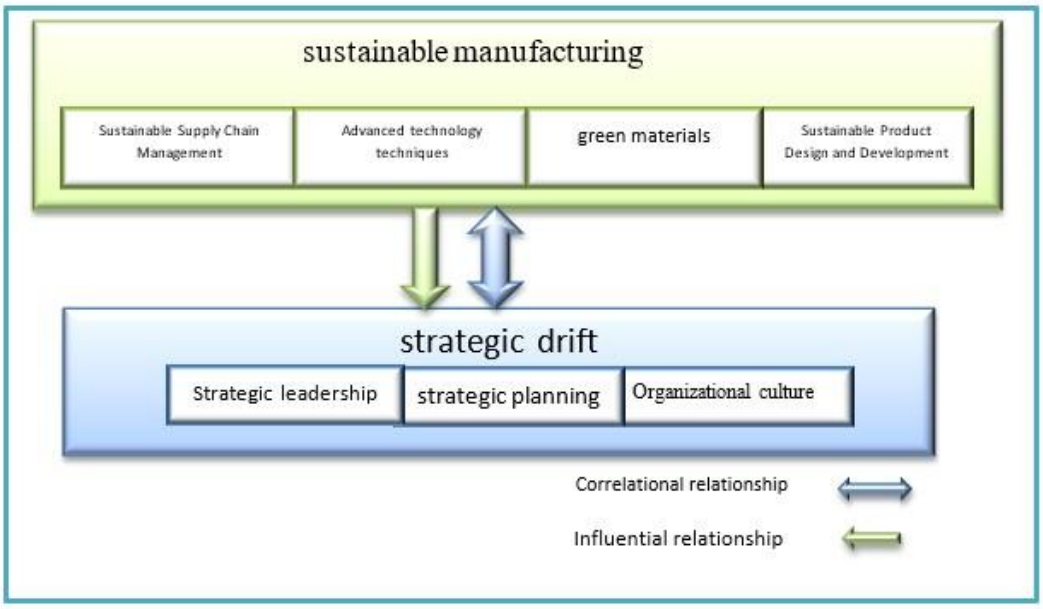

Figure 1. Hypothetical research model

Fifth: Study Community and Sample

This study was conducted on one of the most important sectors in Iraq, namely the industrial sector (Union Food Industries Company Limited). The study sample included the company's employees, as (50) questionnaires were distributed to the employees. After examining the returned questionnaires, (7) questionnaires were excluded due to their inadequacy and failure to meet the required conditions for answering the questionnaire. Thus, the number of questionnaires valid for study and analysis was [7], [8], [9].

Topic Two: Theoretical Framework of the Study

First: Concept of Sustainable Manufacturing

Sustainable manufacturing, also referred to as environmentally friendly manufacturing or green manufacturing, is the practice of integrating comprehensive environmental, economic, and social considerations into the manufacturing process in a way that minimizes resource consumption and environmental impact [10], [11], [12]. It means the company's ability to maintain the good use of natural resources to ensure the achievement of environmental aspects., leading to improved quality of life while conserving energy and natural resources. Ultimately, these products are generally safer for employees, communities, and the environment[13], [14], [15].

There are global standards that guide this field, such as ISO 14001, which focuses on the environmental management system. These standards help companies achieve their sustainable manufacturing goals by improving their operations and reducing their negative impact on the environment. Furthermore, integrated solutions contribute to providing a holistic view of the challenges facing industries, allowing them to develop effective strategies to reduce their environmental impact [16], [17], [18]. Together, these standards and technologies represent practical examples of sustainable manufacturing, and many companies are keen to integrate them into their daily operations to ensure effective sustainable manufacturing.

Second: Importance of Sustainable Manufacturing

The importance of sustainable manufacturing lies in its ability to improve the economic performance of organizations while minimizing potential environmental damage. By leveraging renewable energy and clean production technologies, factories can reduce their resource consumption and leave a smaller environmental footprint. These applications also contribute to guiding industrial organizations toward economic

sustainability by reducing costs and increasing efficiency [19], [20]. The importance of sustainable manufacturing is highlighted by the following:

1. Increase operational efficiency by reducing costs and waste
2. Quick access to potential customers and increased competitive advantage
3. Maintaining the brand and building trust between customers and the company.
4. Respond to regulatory opportunities
5. Sustainable manufacturing can attract new employees, which means businesses will continue to expand
6. Many green or sustainable companies receive government tax benefits when they employ methods and practices that benefit the environment [21], [22], [23], [24].

Third: Sustainable Manufacturing Goals

Sustainable manufacturing is a concept that aims to achieve a balance between production requirements and environmental and social considerations. This type of manufacturing is essential in the modern era, as pressure grows on industries to achieve greater resource efficiency and reduce waste. Sustainable manufacturing relies on a set of key principles, including environmental innovation, rational resource management, and the use of green technology [25].

Sustainable manufacturing is an innovative approach to manufacturing that aims to reduce the negative environmental impact of production processes while maximizing resource efficiency within the organization [26], [27]. By implementing sustainable manufacturing strategies , workers can significantly reduce the environmental impact. These strategies include waste reduction, responsible use of raw materials, energy efficiency, and renewable energy alternatives. (Al-Hamdani and Abdul Karim , believe that the goal of sustainable manufacturing is based on a set of systems and technologies through which organizations seek to fulfill their ethical responsibility towards the environment and society by efficiently using all types of resources and energy, thereby achieving economic goals. Believe that the goal of sustainable manufacturing is to improve environmental performance in terms of health and safety, reduce the spread of toxic materials, and implement lean manufacturing and other sustainable engineering techniques.

Fourth: Dimensions of Sustainable Manufacturing

1. Sustainable Product Design and Development: Product development is one of the most active processes in sustainable manufacturing. Therefore, sustainable product development is affected by variables including environmental systems, economic factors, and customer desires. [28], [29]. The product design phase is one of the most important stages of the product life cycle, as it determines the product's behavior in the next stages [30]. The purpose of designing and developing sustainable products is to reduce waste in manufacturing systems while simultaneously maximizing productivity, reduce lead times, lower operating costs, and improve product quality. Utilize innovative technologies and methods to reduce energy consumption without compromising productivity and efficiency, and reduce overall costs, as money is saved when the organization does not waste time, materials, and employees on unnecessary activities. Overproduction also increases storage and warehouse costs. Understanding the triple constraint is the first step To design and develop sustainable products.
2. Green materials: The manufacturing processes carried out by industrial organizations have a significant impact on the environment in terms of their consumption of large amounts of energy and the accumulation of harmful waste. Therefore, production processes and their operation must be carried out in a way that reduces waste and incompatible by-products, removes toxic

and hazardous materials, conserves materials and energy, and uses environmentally friendly materials in manufacturing. The manufacturing process seeks to meet customer needs from a social and economic perspective without harming the environment and natural resources through optimal investment of renewable resources to reduce damage, remanufacturing, and recycling waste to reduce the impact on health and the environment, and working to improve the efficiency of using existing energy, which enables the preservation of natural resources and limits greenhouse gas emissions through the use of clean, environmentally compatible technology. It aims to improve the efficiency of using raw materials used in industry, which contributes to reducing waste and preserving the environment surrounding industrial areas, ensuring a balance between economic development and environmental sustainability.

3. Advanced technologies: Leveraging innovative technologies such as automation and the Internet of Things to maximize sustainability. Manufacturing also includes aligning production and technology in line with global environmental standards, in addition to expanding the establishment of projects that provide cleaner production services that take these standards into account. The use of advanced technologies in engineering processes and methods reduces pollution, improves business sustainability, and reduces the likelihood of health problems resulting from unsafe manufacturing and design methods. Therefore, manufacturers can achieve this goal without affecting the economic success or efficiency of the organization by using and improving existing processes. Successful production processes clarify sustainability issues, measure the life cycle of a product or service, identify potential concerns about waste and reduce the likelihood of these problems occurring with innovative concepts and minimize financial loss. Therefore, organizations need a profitable process to remain open. Manufacturers work to improve the organization's processes and methods to create minimal financial losses and even promote economic growth when possible.
4. Sustainable supply chain management: It is the practice of integrating environmental, social, and financial considerations into the production and distribution of goods. Streamlining manufacturing logistics processes to enhance efficiency will require materials management to find better and safer materials for various engineering purposes, especially in product design and manufacturing. Manufacturers can identify new and safer materials or develop options to integrate them into their plans and find better and more efficient production methods. Implementing more sustainable supply chain standards can benefit industrial organizations in terms of reducing costs, making operations more efficient and cost-effective, reducing energy requirements, and improving reliability and flexibility within the supply chain. These multiple benefits can generate significant savings for organizations and improve profitability. Sustainable supply chain management can contribute to achieving companies' social and environmental goals and may also enhance brand image. Sustainable supply chain management is becoming increasingly important to customers and stakeholders. Integrating a sustainable supply chain into production processes will protect them from reputational damage resulting from negative environmental impacts and unethical behavior. At the same time, sustainable supply chain management may assist companies in their regulatory compliance by ensuring that operations comply with regulatory requirements.

Fifth: Concept of Strategic Drift

Industrial organizations face difficulties due to their failure to recognize and address strategic drift. This is because organizations are vulnerable to strategic drift because they gradually adapt to environmental change in a context that requires more than mere adaptation. As a result, the company imperceptibly deviates from its strategic plans and strategies appropriate for addressing environmental challenges, leading to a growing gap between its actual position and its intended position. Thus, strategic drift occurs. Strategic drift is an important trend in development and growth strategies based on internal, organizational, and cultural influences within organizations that fail to adapt to changes in the external environment. This means that the condition for drift is the rapid development of organizations that is not compatible with the external environment, and consequently, the failure of the organization's strategies, which causes an organizational crisis and the failure to maintain the strategic position. Strategic drift not only distracts and diverts the focus of an industrial organization, but also wastes time, money, and valuable resources. This, in turn, incurs high operating costs and detracts from the competitive advantage it seeks to achieve. This drift contributes to a decline in the performance of the industrial organization's environment, with all its components, both internally and externally, rendering the organization unable to keep pace with the environmental changes taking place in the sector. This drift stems from several factors, the most important of which are: routine management work, employees' lack of acceptance of the strategy due to their lack of involvement in the preparation or their lack of knowledge of the strategy or the variables it addresses, and a lack of communication between the three different administrative divisions. It also results in a lack of focus in decision-making and discrepancies in work procedures.

Sixth: Causes of Strategic Drift

1. Internal factors related to the organization: The neglect of the organization's senior management, its reluctance to develop, and its resistance to change are among the factors that lead to the emergence of strategic drift. These factors include the prevailing leadership style within the organization, particularly the bureaucratic leadership style, which is characterized by its lack of successful initiatives and its failure to prioritize the organization's core activities, leading to the organization losing its competitive position.
2. External factors: There are many factors that lead to strategic drift. External environmental factors are among the causes of strategic drift, including the rapidly changing dynamics of the competitive situation, technological, social, economic and legal changes, and the diversity of customer needs. Therefore, strategic drift appears when the organization’s plans fail to confront its strategic situation, and this affects its performance. Political factors also play an important role in influencing the organization’s and society’s strategy, in addition to changes that may occur in the market structure, competition, competitive innovation, business practices, and the manner in which the distribution process is carried out. The limited focus on the external environment also plays an early warning role for the organization, especially when signs of strategic drift appear, and this limitation may result from the intensity of the competitive market, and aims to limit the monopoly of products by the organization.

Seventh: Dimensions of Strategic Drift

1. Organizational Culture: Strategic drift is considered a reflection of the organization's culture through the thinking and perception of all administrative levels. It occurs when administrative and cognitive skills are unable to respond to changes in the external environment. Organizational culture is a largely invisible, highly influential social force that drives the organization toward achieving specific goals or objectives. It is a combination

of beliefs, ideology, values, and traditions that guide the organization's internal behaviors, whether individual or collective. It significantly impacts customer-oriented behaviors, the market, and financial performance. It also affects employee attitudes, the effectiveness of the organizational process, and the organization's climate for innovation. It can also contribute to the development of strategic knowledge management and improve organizational performance . One of the tasks of organizational culture is to prepare the organization internally by making adjustments to the organizational structure.

2. Strategic Planning: Strategic planning is considered the backbone of any successful organization. It represents the roadmap that guides the organization to success. Therefore, the absence of strategic planning is one of the negative indicators in the work of organizations, resulting from organizations ignoring the importance of the planning process by making it a consultative process, lacking clarity on the organization's vision and goals, and lacking programs and policies to implement plans. Strategic planning is an indispensable and effective tool for all organizations seeking to remain competitive in a highly competitive environment. This process is used by all small and large organizations across all production and service sectors, as it determines the goals each organization seeks to achieve, as well as the resources and opportunities available to achieve them. The strategic plan increases the levels of productivity and operational efficiency of the entire organization. When properly developed and implemented, it becomes effective. A properly formulated strategic plan also serves as a blueprint or roadmap for the organization to achieve its goals and helps maintain harmony with employees and administrative units .
3. Strategic Leadership: Due to the rapid and turbulent changes in the production environment, organizations are required to face the competitive challenge in order to grow, survive, and adapt. Strategic leaders are those who have the ability to anticipate and prepare for the future, current situations, and future success sites. Therefore, they need the capabilities to prepare resources, energies, and changes that achieve distinction over competitors and control the mechanism of dealing with the environment . Accordingly, effective strategic leadership may lead to raising production efficiency to become a better life for the organization. Therefore, sustainable development is considered the key to strategic focus in determining the quality of strategic leadership. To support and enhance the sustainable development of strategic leadership, we must be able to build a framework for understanding what strategic leadership can include. Strategic leaders are required to create an inspiring and motivating environment to support every individual in the organization and guide them in the right direction in order to achieve the planned results. This requires developing strategic leadership skills, focusing on production processes, setting measurable standards, and creating a clearer vision and mission that is implemented by all employees in the organization .

Topic Three: The Practical Framework of the Research

First: Stability and Validity of Research Measures

The level of stability and internal consistency of the research variables, represented by the variables of sustainable manufacturing and strategic drift, was measured using Cronbach's alpha and the following scales:

1. The independent variable (sustainable manufacturing) consists of four components:

a. Sustainable product design and development, consisting of four components = 0.7835
b. Green materials, consisting of four components = 0.8982
c. Advanced technology techniques, consisting of four components = 0.7655
d. Sustainable supply chain management, consisting of four components = 0.9027

2. The dependent variable consists of three components:

a. Organizational culture, consisting of five components = 0.9413
b. Strategic planning, consisting of four components = 0.8845
c. Strategic leadership, consisting of fifteen components = 0.7879

It is noted from the internal special result between the variables consisting of (sustainable manufacturing and strategic drift) that it is acceptable because the value of the alpha correlation coefficient is considered statistically acceptable when it is equal to or greater than (0.75) in scientific, administrative and behavioral research.

Second: Presenting the results of the research sample's responses

1. The independent variable (sustainable manufacturing)

a. Sustainable product design and development

It is noted from Table (1) that the average response rate for the variable of sustainable product design and development was (4.02), with a general deviation of (0.89), and a general coefficient of variation of (0.217)

The second paragraph, "The organization works to reduce production costs by adopting new designs," had the highest arithmetic mean of (4.6), the lowest standard deviation of (0.66), and the lowest coefficient of variation of (0.13). It is one of the paragraphs with the most consistent responses, according to the coefficient of variation. Meanwhile, the first paragraph, "The organization's management uses raw materials at rates commensurate with the needs of production processes," had the lowest arithmetic mean of (3.4), with a standard deviation of (0.96), and a coefficient of variation of (0.29).

It is also noted from the results of the research sample that they range between (4.6) - (3.4), as these results are limited according to the (Likert) scale between agree and neutral, and this indicates a positive impression among the employees of the organization being studied towards the dimension of designing and developing sustainable products.

b. Green Materials

It is noted from Table (1) that the average response rate for the green materials sub-variable was (3.30), the general deviation was (0.76), and the general coefficient of variation was (0.237).

The sixth paragraph, related to (the organization strives to ensure that manufacturing processes do not lead to environmental pollution), had the highest arithmetic mean of (3.5), a standard deviation of (0.73), and the lowest coefficient of variation of (0.22), while the fifth paragraph, related to (the organization's management preserves natural resources in its manufacturing processes), had the lowest arithmetic mean of (3.1), a standard deviation of (0.76), and a coefficient of variation of (0.25). It is one of the paragraphs with the most consistent responses according to the coefficient of variation.

It is also noted from the results of the research sample that they range between (3.5) - (3.1), as these results are limited according to the (Likert) scale within a neutral choice, and this indicates a moderate impression among the workers in the organization being studied towards the green materials dimension.

c. Advanced Technology Techniques

It is noted from Table (1) that the average response rate for the advanced technology techniques variable was (2.73), with a standard deviation of (0.81), and a standard coefficient of variation of (0.31).

The eleventh paragraph, which is related to (All administrative and production units participate in developing the methods and means used in their operations), obtained the highest arithmetic average, which was (3.1), and a standard deviation of (1.03), while the

coefficient of variation was (0.35), while the twelfth paragraph, which is related to (The organization seeks to reduce the design creatively by using a smaller number of extra parts), obtained the lowest arithmetic average (2.5), with a standard deviation of (0.70), and a coefficient of variation of (0.28), and it is one of the paragraphs in which the answers were most consistent according to the coefficient of variation .

It is also noted from the results of the research sample that they range between (3.1) - (2.5), as these results are limited according to the (Likert) scale between neutral and disagree, and this indicates a negative impression among the employees of the researched organization towards some advanced technology techniques.

d. Sustainable Supply Chain Management

It is noted from Table (1) that the average response rate for the Sustainable Supply Chain Management variable was (3.12), with a standard deviation of (0.90), and a standard coefficient of variation of (0.30).

The thirteenth paragraph, which is related to (the organization's management considers the use of raw materials more efficiently a social responsibility), obtained the highest arithmetic averages, which amounted to (3.3) and a standard deviation value of (0.94), while the coefficient of variation value was (0.28), while the sixteenth paragraph, which is related to (the organization preserves natural resources and reduces environmental damage), obtained the lowest arithmetic averages (2.9) and a standard deviation of (0.85), while the coefficient of variation value was (0.31). The fourteenth paragraph obtained the lowest coefficient of variation, which indicates that it is the paragraph in which the answers were most consistent according to the coefficient of variation.

It is also noted from the results of the research sample that they range between (3.3) - (2.9), as these results are limited according to the (Likert) scale between neutral and disagree, and this indicates a negative impression among the employees of the organization being studied towards the dimension of sustainable management of the supply chain. The general average of the responses of the sample of the organization under study towards the sustainable manufacturing variable was (3.29), The value of the general standard deviation is (0.841), while the value of the general coefficient of variation is (0.267). As shown in Table 1, the average response rate for the variable of sustainable product design and development was 4.02, indicating a generally positive perception among employees toward sustainable product design efforts.

Table 1. Arithmetic means, standard deviations, and coefficients of variation for the responses of the sample of the studied organization, direction of the variable, dimensions of sustainable manufacturing

Sequence	**Phrases**	**Arithmetic mean**	**Standard deviation**	**Coefficient of variation**
Sustainable Product Design and Development				
1	The organization's management uses raw materials at rates commensurate with the needs of production processes.	3.4	0.96	0.29
2	The organization is working to reduce production costs by adopting new designs.	4.6	0.66	0.13
3	The organization's production unit works to develop its products according to international production quality standards.	4.2	0.88	0.219
4	The organization's management follows modern designs to benefit from production process waste.	4.4	1.05	0.23

Average		4.02	0.89	0.217
Green materials				
5	The organization's management conserves natural resources in its manufacturing processes.	3.1	0.76	0.25
6	The organization seeks to ensure that manufacturing processes do not lead to environmental pollution.	3.5	0.73	0.22
7	The unit responsible for the organization is responsible for producing and designing environmentally friendly products.	3.2	0.65	0.21
8	The organization analyzes potential growth opportunities through continuous improvement of its production processes.	3.4	0.89	0.28
Average		3.30	0.76	0.237
Advanced technology techniques				
9	The organization uses advanced and modern machines and equipment in production.	2.7	0.83	0.33
10	Advanced machinery and equipment contribute to reducing maintenance costs.	2.6	0.66	0.28
11	All administrative and production units participate in developing the methods and means used in their operations.	3.1	1.03	0.35
12	The organization seeks to creatively reduce design by using fewer redundant parts.	2.5	0.70	0.28
Average		2.73	0.81	0.31
Sustainable Supply Chain Management				
13	The organization's management considers the efficient use of raw materials to be a social responsibility.	3.3	0.94	0.28
14	The organization is working to provide artificial intelligence tools to suppliers to reduce time.	3.1	0.81	0.27
15	The organization is working on improving with intelligent automation to increase the efficiency of supplier workflows.	3.2	1.02	0.36
16	The organization conserves natural resources and reduces environmental damage.	2.9	0.85	0.31
Average		3.12	0.905	0.305
Average of averages		3.29	0.841	0.267

2. The dependent variable (strategic drift)

a. Organizational culture

Table (2) shows that the average response rate for the organizational culture variable was (3.41), the overall deviation was (0.829), and the overall coefficient of variation was (0.254). The fourth paragraph, "The organizational culture of the organization is a

reflection of its general reputation in the market," had the highest arithmetic mean of (4.2), the lowest standard deviation of (0.69), and the lowest coefficient of variation of (0.19). It was one of the paragraphs with the most consistent responses, according to the coefficient of variation. The third paragraph, "All employees in the organization have full knowledge and awareness of its mission towards society," had the lowest arithmetic mean of (3.1), a standard deviation of (1.02), and a coefficient of variation of (0.35).

It is also noted that the responses of the sample of the organization surveyed ranged between (4.2) -(3.1), as the results, according to the Likert scale, ranged between "agree" and "neutral." This indicates a positive impression among employees in the organization surveyed regarding the organizational culture dimension .

b. Strategic Planning

Table (2) shows that the average response rate for the strategic planning variable was (3.50), with a standard deviation of (0.850), and a general coefficient of variation of (0.238). The eighth paragraph, "The organization uses strategic analytical tools to ensure the achievement of strategically established plans," had the highest mean of (4.1), with a standard deviation of (0.88), and a coefficient of variation of (0.22). This was one of the paragraphs with the most consistent responses, according to the coefficient of variation. The ninth paragraph, "The organization works to build its vision based on achievable methodological foundations," had the lowest mean of (3.1), with a standard deviation of (0.93), and a coefficient of variation of (0.27). It is also noted from the results of the answers of the sample of the researched organization that they range between (4.1) - (3.1), as the results are limited according to the (Likert) scale between agree and neutral, and this indicates a positive impression among the employees of the researched organization towards the dimension of strategic planning.

c. Strategic Leadership

Table (2) shows that the average response rate for the strategic leadership variable was (3.29), with a standard deviation of (0.818), and a standard coefficient of variation of (0.264).

The fifteenth paragraph, "The organization formulates strategic plans, and this is done by taking into account the opinions of employees," had the highest mean of (4.3), with a standard deviation of (0.57), and a coefficient of variation of (0.15). It was one of the paragraphs with the most consistent responses, according to the coefficient of variation. Meanwhile, the twenty-third paragraph, "The management encourages most of its employees to participate in training courses to improve their skills and experience," had the lowest mean of (2.7), with a standard deviation of (0.67), and a coefficient of variation of (0.31). It is also noted from the results of the answers of the sample of the researched organization that they range between (4.3) - (2.7), as the results are limited according to the (Likert) scale between agree and neutral, and this indicates a positive impression among the employees of the researched organization towards the strategic leadership dimension.As illustrated in Table 2, the average response for organizational culture was 3.41, suggesting a generally positive view among employees regarding shared values and vision.

Table 2. Arithmetic means, standard deviations, and coefficients of variation for the responses of the sample of the organization under study, direction of the variable, and dimensions of strategic drift

Sequence	**Phrases**	**Arithmetic mean**	**Standard deviation**	**Coefficient of variation**
Organizational culture				

1	The organization's management and all its employees are committed to the core values of its culture.	3.2	0.64	0.21
2	The organization's vision aligns with the community's vision.	3.3	0.96	0.30
3	All employees are fully aware of its mission toward society.	3.1	1.02	0.35
4	The organization's organizational culture reflects its overall reputation in the market.	4.2	0.69	0.19
5	The organization seeks to motivate and engage its employees to provide a suitable work environment.	3.4	0.79	0.26
Average		3.44	0.82	0.26
Strategic planning				
6	The organization formulates strategic plans by taking into account employee opinions.	3.5	0.85	0.26
7	The strategic plans are implemented according to pre-planned timelines.	3.3	0.75	0.21
8	The organization uses strategic analytical tools to ensure the implementation of strategically formulated plans.	4.1	0.88	0.22
9	The organization works to build its vision based on achievable methodological foundations.	3.1	0.93	0.27
Average		3.50	0.85	0.238
Strategic leadership				
10	Decision-making is central to all matters related to the organization's operations.	4.1	1.03	0.27
11	The organization's management is characterized by effective communication with all its employees, ensuring that the organization's objectives are achieved.	3.7	0.91	0.26
12	The organization's management is characterized by the flexibility necessary to adapt to the changing external environment.	3.3	0.84	0.27
13	The organization's main strategic objectives are measurable.	3.1	0.77	0.26
14	The organization's production management focuses on providing products to all customers and employees	2.9	0.66	0.26
15	The organization's strategic objectives contribute to determining its priorities.	4.3	0.57	0.15
16	The organization's leadership focuses on supporting innovation among its employees.	3.7	0.80	0.24
17	The organization analyzes the internal environment to exploit strengths and avoid weaknesses.	3.3	0.68	0.22

18	The organization seeks to analyze the external environment to compare opportunities and threats.	3.1	0.76	0.26
19	The organization's management relies on precise procedures to select appropriate plans.	3.2	0.87	0.25
20	Senior management focuses on the extent to which the strategic plan aligns with environmental factors.	2.8	0.65	0.23
21	Senior management holds seminars and meetings to discuss employee ideas and develop their capabilities and skills.	3.4	0.98	0.27
22	The organization helps its employees continually develop their technological skills.	2.8	1.02	0.38
23	Management encourages most employees to participate in training courses to improve their skills and experience.	2.7	0.76	0.31
24	The organization makes decisions ethically and in accordance with a set of social values.	3.1	0.97	0.33
Average		3.29	0.818	0.264
Average of averages		3.41	0.829	0.254

Third: Testing the research hypotheses

1. The first main hypothesis (a correlation between sustainable manufacturing in its dimensions and strategic drift in its dimensions)

It is noted from Table (2) the correlation relationships between the variable of sustainable manufacturing dimensions and strategic drift. The simple correlation coefficient was used to find these relationships, which are as follows:

a. Sustainable product design and development: There is a positive and significant correlation between sustainable product design and development and the organizational culture dimension, with a value of (0.264) at the (5%) level, and there is a weak and statistically insignificant correlation between the variable of sustainable product design and development and strategic planning, with a value of (0.218) at the (5%, 1%) levels, and there is a positive and significant correlation between the variable of sustainable product design and development and strategic leadership, with a value of (0.266) at the (5%) level, as well as a positive and significant correlation at the (5%) level between the variable of sustainable product design and development and the dimensions of strategic drift combined, with a value of (0.248).

b. Green materials: There is a positive and significant correlation between green materials and the organizational culture dimension, with a value of (0.687) at the (1%) level, and there is a positive and significant correlation between the green materials variable and strategic planning, with a value of (0.356) at the (5%) level, and there is a positive and significant correlation between the green materials variable and strategic leadership, with a value of (0.686) at the (1%) level for green materials, as well as a positive and significant correlation at the (5%) level

between the green materials variable and the combined dimensions of strategic drift, with a value of (0.643).

T- Advanced technology techniques: There is a positive and significant correlation between advanced technology techniques and the organizational culture dimension, with a value of (0.348) at the (5%) level, and there is a positive and significant correlation between the variable of advanced technology techniques and strategic planning, with a value of (0.720) at the (1%) level, and there is a positive and significant correlation between the variable of advanced technology techniques and strategic leadership, with a value of (0.354) at the (5%) level, as well as a positive and significant correlation at the (1%) level between the variable of advanced technology techniques and the dimensions of strategic drift combined, with a value of (0.796).

c. Sustainable Supply Chain Management: There is a positive and significant correlation between sustainable supply chain management and the strategic planning dimension, with a value of (0.641) at the (1%) level, and a weak and statistically insignificant correlation between the sustainable supply chain management variable and organizational culture, with a value of (0.239) at the (1%) and (5%) levels, and there is a positive and significant correlation between the sustainable supply chain management variable and strategic leadership, with a value of (0.351) at the (5%) level of sustainable supply chain management, as well as a positive and significant correlation at the (5%) level between the sustainable supply chain management variable and the combined dimensions of strategic drift, with a value of (0.349).

Table 3. Simple correlation coefficient between the dimensions of sustainable manufacturing and the dimensions of strategic drift

Strategic Drift / Sustainable Manufacturing	**Organizational culture**	**strategic planning**	**Strategic leadership**	**Dimensions of strategic drift combined**
Sustainable Product Design and Development	0.264*	0.218	0.266*	0.248*
Green Materials	0.687**	0.356*	0.686**	0.643**
Advanced Technology	0.348*	0.720**	0.354*	0.796**
Sustainable Supply Chain Management	0.239	0.641**	0.351*	0.349*

2. The second main hypothesis (the dimensions of sustainable manufacturing affect the reduction of strategic drift)

We note from Table (3) the impact relationships between the dimensions of sustainable manufacturing and strategic drift. The multiple regression model, t-test, and F-test were used to test this hypothesis, which are as follows:

a. The impact of sustainable manufacturing dimensions on the organizational culture dimension

1) The calculated t-values for the regression coefficients of the sustainable manufacturing dimensions (green materials and sustainable supply chain management) on organizational culture are significant at the 5% level, indicating that the regression coefficients of (1.32, 1.35) are stable, respectively, at the aforementioned level. The calculated t-values for the regression coefficients of the

sustainable manufacturing dimensions (sustainable product design and development and advanced technology techniques) on organizational culture are significant at the 1% level, indicating that the regression coefficients of (0.055, 0.832) are not stable, respectively, at the aforementioned level. This indicates that the dimensions of green materials and sustainable supply chain management have a significant impact through multiple regression.

2) The calculated value of (f) for the multiple regression model of sustainable manufacturing dimensions on organizational culture is significant at the (1%) level, indicating that the significance of this model is stable at the specified level.
3) The explanation coefficient (R^2) for the multiple regression of sustainable manufacturing dimensions on organizational culture shows that it explains (38%) of the organizational culture dimension variable, with the remaining percentage attributed to the contribution of other variables not included in the models.

b. The impact of sustainable manufacturing dimensions on the strategic planning dimension

1) The calculated t-values for the regression coefficients of the sustainable manufacturing dimensions (green materials and sustainable supply chain management) on strategic planning are significant at the 5% level, indicating that the regression coefficients of (1.44, 2.05) are stable, respectively, at the aforementioned level. The calculated t-values for the regression coefficients of the sustainable manufacturing dimensions (sustainable product design and development and advanced technology techniques) on strategic planning are significant at the 1% level, indicating that the regression coefficients of (0.065, 1.02) are not stable, respectively, at the aforementioned level. This indicates that the dimensions of green materials and sustainable supply chain management have a significant impact through multiple regression .
2) The calculated value of (f) for the multiple regression model of the dimensions of sustainable manufacturing on strategic planning is significant at the (1%) level, indicating that the significance of this model is stable at the specified level.
3) The explanation coefficient (R^2) for the multiple regression of the dimensions of sustainable manufacturing on strategic planning shows that it explains (35%) of the organizational culture dimension variable, with the remaining percentage attributed to the contribution of other variables not included in the models.

T- The impact of sustainable manufacturing dimensions on the strategic leadership dimension.

1. The calculated t-values for the regression coefficients of the sustainable manufacturing dimensions (green materials and sustainable supply chain management) on strategic leadership are significant at the 5% level, indicating that the regression coefficients of (1.28, 2.8) are stable, respectively, at the aforementioned level. The calculated t-values for the regression coefficients of the sustainable manufacturing dimensions (sustainable product design and development and advanced technology techniques) on strategic leadership are significant at the 1% level, indicating that the regression coefficients of (0.048, 0.79) are not stable, respectively, at the aforementioned level. This indicates that the dimensions of green materials and sustainable supply chain management have a significant impact through multiple regression.
2. The calculated value of (f) for the multiple regression model of the dimensions of sustainable manufacturing on strategic leadership is significant at the (1%) level, indicating that the significance of this model is stable at the specified level.
3. The explanation coefficient (R^2) for the multiple regression of the dimensions of sustainable manufacturing on strategic leadership shows that it explains (31%) of the organizational culture dimension variable, with the remaining percentage attributed to the contribution of other variables not included in the models. The

impact of each sustainable manufacturing dimension on the individual dimensions of strategic drift is demonstrated in Table 4.

Table 4. Regression analysis of the dimensions of sustainable manufacturing on the dimensions of strategic drift

Strategic Drift / Sustainable Manufacturing	Organizational culture			strategic planning			Strategic leadership		
	B	T	F , R^2	B	T	F , R^2	B	T	F , R^2
Sustainable Product Design and Development	0.055	0.50	F=15.9 , R^2 37%** =	0.065	0.52	F=10.3 , R^2 35%** =	0.048	0.46	F=14.3 R^2 32%**=
Green Materials	1.32	2.13*		1.45	2.1*		1.28	2.1*	
Advanced Technology	0.832	1.37		1.02	1.48		0.79	1.29	
Sustainable Supply Chain Management	1.35	2.77*		2.05	2.48*		1.36	2.4*	

4. Conclusion

1. It can be concluded that there are high levels of significance between the sustainable manufacturing variable and the company's strategic drift, and that the more Etihad Food Industries Limited focuses on sustainable manufacturing, the greater its ability and success in reducing strategic drift.
2. It can be inferred that the more a company focuses on the dimensions of sustainable product design and development, green materials, advanced technology, and sustainable supply chain management, the more it contributes to raising its performance and operational levels. This is due to the positive correlation between these dimensions and reducing strategic drift.
3. We note the presence of a positive, significant correlation between most of the dimensions of sustainable manufacturing and the dimensions of strategic drift. This means that strategic drift decreases the more the company is interested in sustainable manufacturing, especially green materials and advanced technology techniques.
4. It can be concluded that the company operates in accordance with international quality standards and advanced production technology, with good levels of consistency. The company also has a vision for designing and developing sustainable products and operates accordingly.
5. Successfully applying sustainability in manufacturing provides a strategic way to increase the effectiveness and production efficiency of operational processes and reduce the risks of strategic drift.

Second: Recommendations

1. Develop administrative support for the company by senior management across all areas of work. This encourages employees to participate in decisions related to its future and impacts business policies. It also enhances their awareness of identifying the risks they face and reducing strategic drift.
2. The company's management must strive to achieve excellence in its strategy and delve deeper into understanding, analyzing, and studying competitors' strategies, enabling

it to develop strategic models that embrace the foundations of excellence and determine the company's future path.

3. The company's senior management must instill organizational culture values among its employees, which will instill principles of work mastery, self-development, and the ability to manage production processes efficiently and effectively.
4. The company must focus effectively on sustainable supply chain management, which reduces the company's need to maintain inventory, leading to lower storage costs and reduced financial risks.
5. The management of the company under study must adopt effective programs based on established methods in sustainable manufacturing companies, which will help maintain its equipment in good condition and thus reduce strategic deviation.

REFERENCES

[1] T. A. H. Al-Saray, Analysis of Operational Failure within the Framework of the Sustainable Manufacturing Philosophy and its Impact on Outstanding Performance, Ph.D. dissertation, Univ. of Mosul, 2017.

[2] R. A. Al-Hamdani and A. A. Al-Shahwani, "Achieving competitive superiority within the framework of adopting some sustainable manufacturing strategies: A survey study," Tikrit J. Admin. Econ. Sci., vol. 16, no. 51, 2020.

[3] S. K. A. Al-Raqqad, Strategic Leadership and Its Relationship to the Competitiveness of Public Secondary School Principals in the Capital Governorate of Amman, Middle East Univ., Amman, 2020.

[4] R. A. Al-Hamdani and T. A. H. Al-Saray, "Dealing with operational failure within the framework of sustainable manufacturing philosophy," Tikrit J. Admin. Econ. Sci., vol. 2, no. 38, 2017.

[5] N. A. K. M. Al-Rumi, Evaluating the Implementation of Environmental Sustainability Requirements Using the Analytical Hierarchy Process, M.Sc. thesis, Middle Tech. Univ., Baghdad, 2018.

[6] A. A. W. A. Al-Shahwani, The Contribution of Sustainable Manufacturing Strategies to Enhancing Marketing Opportunities, M.Sc. thesis, Univ. of Mosul, 2020.

[7] R. M. Abdul-Hamid, "The concept of organizational culture: A theoretical and applied reference review," Grad. Studies Stat. Research, Cairo Univ., vol. 1, no. 1, 2022.

[8] S. Abdel Samad, The Impact of Organizational Culture on Organizational Commitment in Economic Institutions, M.Sc. thesis, Univ. of Kasdi Merbah, 2019.

[9] S. M. Ali, "The impact of strategic planning on job performance: A field study of Syriatel Telecom Company," Syrian Virtual Univ., Syria.

[10] A. B. A. Al-Mashhadani, The Role of Strategic Leadership in Reducing Organizational Risks, M.Sc. thesis, Univ. of Mosul, 2019.

[11] A. B. A. Al-Mashhadani, The Role of Strategic Leadership in Reducing Organizational Risks, M.Sc. thesis, Univ. of Mosul, 2019.

[12] S. A. Adekunle and O. Dakare, "Sustainable manufacturing practices and performance of the Nigerian table water industry," Manage. Environ. Qual., vol. 31, no. 4, pp. 1003–1022, 2020.

[13] S. H. Abdul-Rashid, N. Sakundarini, R. A. R. Ghazilla, and R. Thurasamy, "The impact of sustainable manufacturing practices on sustainability performance," Int. J. Oper. Prod. Manage., vol. 37, no. 2, 2017.

[14] H. R. Alalfy and D. A. Elfattah, "Strategic leadership and its application in Egyptian Universities," Acad. J. Interdiscipl. Stud., vol. 3, no. 6, pp. 59–69, 2014.

[15] S. T. Bonnici, "Strategic drift," Wiley Encycl. of Management, pp. 1–4, 2015.

[16] L. Dwyer, N. Mistilis, D. Edwards, and C. Roman, "Gambling with our tourism future," Tourism Futures Research, 2016.

[17] M. Gajere, "The impact of strategic drift and tactical wear-out," Int. J. Emerg. Trends Soc. Sci., vol. 3, no. 2, pp. 74–79, 2018.

[18] H. N. Hoshi and S. A. Q. Hamid, "High containment management and its role in strategic drift," Maysan Res. J., vol. 17, no. 34, 2021.

[19] M. Hogan, "Sustainable manufacturing: How to use 3D printing for sustainable production," Scientific Article, 2023.

[20] N. N. Jabr, "The importance of strategic planning and its role in crisis management," Univ. of Al-Qadisiyah, 2021.

[21] B. S. Lafta and F. N. Musa, "The impact of strategic balance in reducing the company's strategic drift," Univ. of Baghdad J., no. 69, pt. 1, 2023.
[22] N. S. M. Molhambani, Strategic Leadership and Its Dimensions, Univ. of Zakho, 2021.
[23] A. Moldavska, "Model-based sustainability assessment – an enabler for transition to sustainable manufacturing," Procedia CIRP, vol. 48, pp. 409–415, 2016.
[24] H. H. Millar and S. N. Russell, "The adoption of sustainable manufacturing practices in the Caribbean," Bus. Strategy Environ., vol. 20, no. 8, pp. 512–526, 2011.
[25] R. A. Raouf and T. A. Hawass, "Addressing operational failures within the framework of sustainable manufacturing philosophy," Tikrit J. Admin. Econ. Sci., vol. 2, no. 38, 2019.
[26] T. M. Salloum and K. I. Nour, "Analysis of the relationship between waste recycling and SDG 2015–2030," J. Admin. Sci., vol. 26, no. 132, 2020.
[27] A. F. E. S. Sultan, "Sustainable manufacturing practices and competitive advantage," Sci. J. Financ. Commercial Stud. Res., vol. 3, no. 2, Damietta Univ., Egypt.
[28] G. I. Sidunova and A. V. Shokhnekh, "Balance-cognitive approach to foresight development," in Int. Conf. Future of Global Financial System, pp. 657–665, 2019.
[29] R. M. Thirupathi, S. Vinodh, and S. Dhanasekaran, "Application of system dynamics modelling for a sustainable manufacturing system," Clean Technol. Environ. Policy, vol. 21, pp. 1055–1071, 2019.
[30] L. Wu et al., "Aligning organizational culture and operations strategy," J. Organ. Change Manage., vol. 32, no. 2, 2019.