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The impact of green innovation (environmentally friendly) on achieving environmental sustainability: An applied study in Al-Etihad Food Industries Co. Ltd.

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Abstract: The current research aims to illustrate the relationship between environmentally friendly innovation and environmental sustainability. The research hypothesizes that environmentally friendly innovation contributes to achieving environmental sustainability. To test the research hypotheses, the researchers distributed 300 questionnaires to employees at Al-Etihad Food Industries Co. Ltd. A total of 292 questionnaires were received, of which 272 were valid for analysis. The advanced statistical program Smart PLS was used for the analysis. The research reached several conclusions, the most important of which is that environmentally friendly innovation significantly affects the achievement of environmental sustainability. The research provided several recommendations, the most important of which is that organizations, institutions, and all stakeholders should promote environmentally friendly innovation to advance the achievement of environmental sustainability.
Keywords: Environmentally friendly innovation, environmental sustainability, Al-Etihad Food Industries Co. Ltd.

Study Methodology

First: Study Problem

There is a growing interest in environmental sustainability among many industrial and service organizations. This interest has become a fundamental part of their strategies, presenting a challenge that requires innovative solutions. The problem becomes more evident as the application of environmental sustainability principles increases in competing organizations, necessitating these organizations to keep pace with changes in this field. In this context, numerous studies have recommended environmentally friendly innovation and proactive product development strategies as successful solutions that provide a competitive advantage. Hence, these variables can be seen as solutions to achieve environmental sustainability. The study problem can be summarized in the following question: How can green innovation be a driving force in improving the company's environmental performance to achieve environmental sustainability? This main question leads to several sub-questions:

1. What is the nature of the relationship between environmentally friendly innovation in all its dimensions and environmental sustainability?
2. What is the impact of environmentally friendly innovation in all its dimensions on environmental sustainability?

Second: Study Objectives

This study aims to achieve the following objectives:

1. To examine the nature of the relationship between environmentally friendly innovation in all its dimensions and environmental sustainability.
2. To assess the impact of environmentally friendly innovation in all its dimensions on environmental sustainability.

Third: Importance of the Study

The importance of the current study is highlighted in the following points:

1. It addresses new variables in business management literature, represented by the independent variable of environmentally friendly innovation and the dependent variable of environmental sustainability.
2. According to the researchers' knowledge, no previous study has combined the current study's variables into a single hypothetical model.
3. There is a scarcity of studies addressing the current study's variables, despite their critical importance for the success of organizations.
4. It will assist the company under study in making the best use of the current study's variables, thereby contributing to the company's success in its business environment.

Fourth: Study Hypotheses

The current study attempts to test the following hypotheses to achieve its objectives:

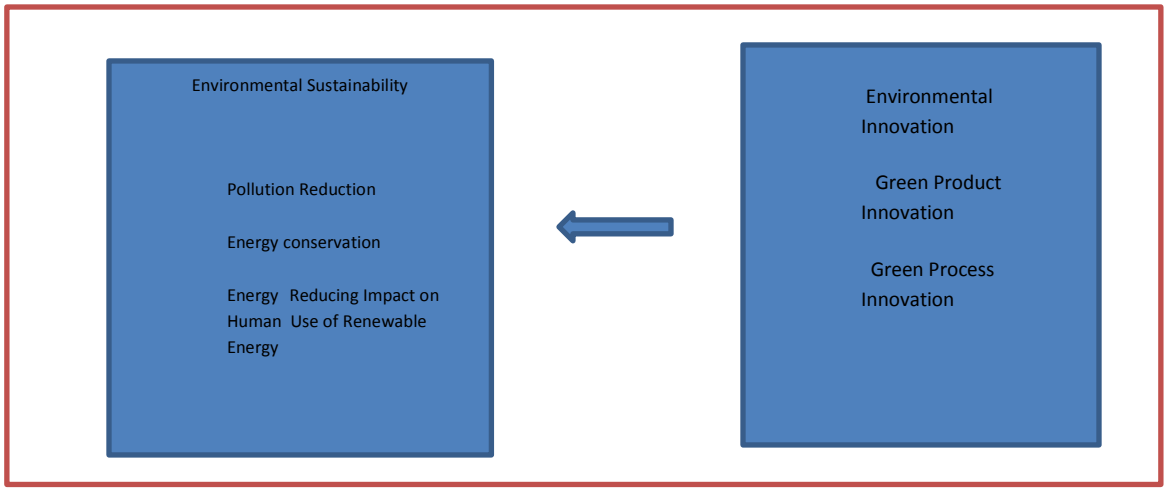
1. Main Hypothesis 1: There is a statistically significant correlation between environmentally friendly innovation and environmental sustainability.
- Sub-Hypothesis 1: There is a statistically significant correlation between green product innovation and environmental sustainability.
- Sub-Hypothesis 2: There is a statistically significant correlation between green process innovation and environmental sustainability.

2. Main Hypothesis 2: Environmentally friendly innovation significantly affects environmental sustainability.
- Sub-Hypothesis 1: Green product innovation significantly affects environmental sustainability.
- Sub-Hypothesis 2: Green process innovation significantly affects environmental sustainability.
- Fifth: Hypothetical Framework of the Study

Graph (1) Prepared by Researchers

Sixth: Study Variables

1. Environmentally Friendly Innovation: Environmentally friendly innovation is an integrated approach that emerged with the increasing focus on environmental sustainability. It has garnered the attention of many researchers in the field of innovation, becoming one of the most important strategic tools used to gain sustainable competitive advantage in response to increasing environmental pressures. It is a complex process that encompasses internal systems, employees, and external environments. According to Kemp et al. (2000),



2. it involves the production, absorption, and exploitation of a new product, production process, service, management, or working method that, throughout its life cycle, reduces environmental risks, pollution, and other negative impacts associated with the use of resources compared to relevant alternatives.

3. Environmental Sustainability: The term environmental sustainability refers to systemic conditions where human activities at global or regional levels do not disrupt natural cycles beyond the planet's capacity to withstand, while also not depleting natural capital that must be shared with future generations. This concept aligns with three constraints: a physical constraint based on the planet's capacity, and an ethical constraint emphasizing equality, which asserts that in a sustainable framework, every individual, including future generations, has the right to the same environment, meaning the same amount of natural resources (Vezzoli & Manzini, 2008).

Seventh: Study Sample Population

Al-Etihad Food Industries Co. Ltd. has a workforce of 3,333 employees with specialized scientific, engineering, technical, and administrative expertise. The company's capabilities align with the requirements of the production process and are supported by higher qualifications from PhD, Master's, and higher diploma holders. These professionals can significantly contribute to the development and advancement of the production process by participating in specialized internal and external training courses, as well as self-organized courses by the company's staff to achieve production efficiency and effectiveness.

Section Two: Theoretical Framework:

Environmental Innovation

First: Concept of Environmentally Friendly Innovation

The economic and technological development that the world experienced after World War II brought significant positive changes to the quality of human life and well-being. At the same time, these changes often came at the cost of

environmental quality, leading to environmental pollution problems in both developed and developing industrial countries (Yu & Song, 2018: 55). We now live in a disturbed environment due to modern developments, which have significantly influenced the emergence of new types of creativity and innovations, among which environmentally friendly innovation stands out as a response to workplace disruptions and environmental pressures (Dhar & Mittal, 2016: 22). Environmentally friendly innovation has become a contemporary approach that began to gain focus with the initial interest in environmental sustainability (Sudaryati et al., 2020: 55).

Environmentally friendly innovation can be defined as the process of creating a new idea and transforming it into a new business value, or as creativity (coming up with a new idea) and implementing it to reach the market (Arena et al., 2017: 22).

Second: Dimensions of Environmentally Friendly Innovation

Several studies and researches have agreed that environmentally friendly innovation generally consists of the following dimensions (Khazaal & Dhiab, 2012: 132):

1. Innovation in Green Products: Innovation in green products represents the introduction of significantly new and improved products, aligning with technological and environmental innovation (Arfi et al., 2018: 55). Fundamental improvements to products are included by relying on basic technical specifications, applying innovative ideas in designing, manufacturing, and marketing new products to achieve environmental improvement (Iranmanesh et al., 2015: 304). This also involves modifying current products to reduce negative impacts on the environment throughout the product lifecycle, and transferring green product characteristics externally by placing environmental labels to indicate them (Khazaal & Dhiab, 2019: 309).
2. Innovation in Green Processes: Innovation in green processes refers to modifying manufacturing processes and systems to produce environmentally friendly products, thereby achieving environmental goals (Chen et al., 2015: 88). This adaptation involves processes that reduce negative environmental impacts during material procurement, production, and delivery (Chiou et al., 2011: 824). Innovative methods are used to reduce the negative environmental impacts resulting from production and related activities (Khazaal & Dhiab, 2019: 309).

Section Two: Environmental Sustainability

First: Concept of Environmental Sustainability

The concept of sustainability was first introduced into political language by the Club of Rome, an international group of scientists, business executives, and public officials, in a report published in 1975 titled "The Limits to Growth" (Attah, 2010: 7). Since then, numerous studies and research have been conducted on sustainability, yet it remains a pressing concern for most business organizations and their leaders, as the sustainability of businesses in their operations is essential for the survival, continuity, and development of a company (Krause et al., 2016: 22). Attention to the environment is now a measure of progress for countries and organizations across various fields. This increased focus on environmental conservation has evolved into what is known as environmental sustainability, which is concerned with the capacity to maintain environmental goals (Al-Azhar & Khalidi, 2018: 596).

Environmental sustainability is defined as a process that takes into consideration the broader efforts and policies implemented by the state to enhance the ability of individuals, organizations, and the economy to achieve the necessary transformation in organizations and the environment. The more effective, efficient, and integrated these policies are, the faster the development process will be, yielding the desired results (Rogers et al., 2012: 99).

Second: Dimensions of Environmental Sustainability

According to Daoud and Jaber (2014: 155), the dimensions of environmental sustainability are as follows:

1. Pollution Reduction: While environmental pollution has been recognized for centuries, it became particularly prominent following the Industrial Revolution, which brought technological advancement and sometimes excessive and unregulated production processes (Jabara, 2015: 5). Environmental pollution problems have intensified in recent years, increasing efforts to find ways to mitigate and halt its severity. Global environmental organizations, research centers, and universities worldwide have collaborated to strive for a pollution-free world or at least to stop the alarming environmental degradation. It's noteworthy that environmental pollution has no specific origin; pollution in one country can lead to pollution in neighboring countries. Since environmental pollution is a global phenomenon threatening all areas, ecosystems, and living organisms, including human societies, it is crucial to monitor pollution, identify its sources, and work to reduce them (Jaber, 2014: 322).
2. Resource Consumption Management: Resource consumption management involves preserving resources, which are the consumables and productive materials, and developing these resources sustainably. Environmental depletion is one of the factors that conflict with environmental sustainability. Thus, there must be scientific management of natural resources linked with environmental management systems to reduce pressure on them. This can be achieved by adopting a method focused on how to economically exploit available resources to meet current needs while ensuring

that future generations' requirements are met without causing harm to the environment (Al-Azawi & Al-Sebaa, 2013: 96).

The Theoretical Framework

Section One: Environmental Innovation

First: The concept of Eco-Friendly Innovation

The economic and technological development that the world witnessed after World War II brought significant positive changes to human quality of life and well-being. However, these changes often came at the cost of environmental quality, leading to environmental pollution problems in both developed and developing industrial countries alike (Yu & Song, 2018: 55). We now live in a disturbed environment due to modern developments, which have had a significant impact, resulting in new types of innovations. One of the most important of these is eco-friendly innovation, driven by disturbances in the work environment and environmental pressures (Dhar & Mittal, 2016: 22). Eco-friendly innovation has become one of the contemporary approaches that began to be emphasized with the advent of environmental sustainability (Sudaryati et al., 2020: 55).

Eco-friendly innovation can be defined as the process of creating a new idea and transforming it into a new business value, or it is creativity (reaching a new idea) and implementing it to reach the market (Arena et al., 2017: 22).

Second: Dimensions of Eco-Friendly Innovation

Several studies and research agree that eco-friendly innovation generally consists of the following dimensions (Khazal & Dhiab, 2012: 132):

1. Innovation in Green Products: Green product innovation represents the introduction of significantly new and improved products in line with technological and environmental innovation (Arfi et al., 2018: 55). This includes essential improvements to products through the application of innovative ideas in the design, manufacture, and marketing of new products for environmental improvement (Iranmanesh et al., 2015: 304). It also involves modifying existing products to reduce negative environmental impacts throughout the product life cycle and labeling them with environmental markers (Khazal & Dhiab, 2019: 309).
2. Innovation in Green Processes: Innovation in green processes refers to modifying manufacturing processes and systems to produce environmentally friendly products that achieve environmental goals (Chen et al., 2015: 88). This involves adapting manufacturing processes that reduce negative environmental impacts during the purchase of materials, production, and delivery (Chiou et al., 2011: 824), and using innovative methods to minimize the environmental impacts of production and related activities (Khazal & Dhiab, 2019: 309).

Section Two: Environmental Sustainability

First: The Concept of Environmental Sustainability

The term sustainability was first used in political language by the Club of Rome, an international group of scientists, business managers, and public officials, in a 1975 report titled "The Limits to Growth" (Attah, 2010: 7). Since then, numerous studies and research have been conducted on sustainability, but it remains a major concern for most business organizations and their leaders, as the sustainability of business organizations in their operations is essential for the survival, continuation, and development of the company (Krause et al., 2016: 22). Environmental concern has become one of the criteria for measuring the development of countries and organizations in various fields, leading to the concept of environmental sustainability, which focuses on the ability to maintain environmental goals (Al-Azhar & Khalidi, 2018: 596).

Environmental sustainability is defined as a process that takes into account the efforts and policies adopted by the state to enhance the capacity of individuals, organizations, and the economy to achieve the necessary transformation in organizations and the environment. The more effective, efficient, and integrated the policies are, the faster the development process and the more the desired results are achieved (Rogers et al., 2012: 99).

Second: Dimensions of Environmental Sustainability

According to Dawood and Jabir (2014: 155), the dimensions of environmental sustainability are:

1. Reducing Pollution: Although environmental pollution has been recognized for hundreds of years, it became particularly evident after the Industrial Revolution, which brought technological advancements and excessive use of unregulated production processes (Jabara, 2015: 5). In recent years, environmental pollution problems have intensified, and there has been increased interest in finding ways to mitigate their severity. Efforts have been made by global environmental organizations, research centers, and universities worldwide to achieve a pollution-free world or, at least, to stop the alarming degradation of the ecosystem. It is noteworthy that environmental pollution is not confined to a specific location; pollution in one country can lead to pollution in neighboring countries. Given that environmental pollution is a global phenomenon threatening ecosystems and human communities, it is essential to monitor pollution, identify its sources, and work to reduce it (Jabir, 2014: 322).
2. Resource Consumption Efficiency: Efficient resource consumption involves conserving consumable and productive resources and developing them sustainably. Resource depletion is one of the factors opposing

environmental sustainability. Therefore, there must be scientific management of natural resources linked to environmental management systems to reduce pressure on them. This can be achieved through an approach that focuses on economically exploiting available resources to meet current needs while ensuring future generations' needs without harming the environment (Al-Azawi & Al-Sabbawi, 2013: 96).

3. Reducing Impact on Human Health: Human health is deeply rooted in the environment, affecting genetic characteristics, disease incidence, treatment, and prevention. It influences growth, exposure to infections, nutrition, and other aspects throughout life. The impact of the environment, especially pollution, on human health is referred to as environmental health, defined as "a state of a stable and healthy environment for a specific type of living organism, particularly humans, enabling them to live healthily and perform their vital activities."

4. Use of Renewable Energy: Renewable energy sources are characterized by their continuous exploitation without depleting their source. Renewable energy is obtained through energy currents that occur naturally and cyclically, such as electricity generated from the sun, wind, biomass, geothermal, and hydropower, as well as biofuels and hydrogen from renewable sources. Today, the environment is a critical element of rational resource exploitation and a fundamental variable in sustainable development due to the negative impacts of pollution on the climate and the fact that many natural resources are non-renewable, necessitating their use according to principles that preserve sustainability and prevent imbalance or growth inhibition (Talebi & Sahel, 2008: 203).

Chapter Three: The Practical Aspect of the Research

Section One: An Overview of the Company Under Study and Descriptive Statistics

First: An Overview of the Company Under Study

Union Food Industries Company Limited was established in 2005 in the Al-Madhatiya area of Babil Governorate. The company began by establishing a sugar refining factory, starting its production of refined white sugar in early 2012 with a current production capacity of 3000 tons of refined white sugar per day. In 2016, the company established a vegetable oil refining factory adjacent to the sugar refining factory, starting production of refined vegetable oil in early 2017 with an initial production capacity of 2000 tons per day, which was later doubled to reach 4000 tons per day. The company employs approximately 2500 employees. Union Transport Company owns 200 trucks for transporting raw sugar and 100 tankers for transporting raw oil from the port of Umm Qasr in Basra to the company's site and also transports the company's products to the local market.

Second: Descriptive Statistics

Introduction:

Descriptive analysis represents the lens through which the extent of the variables addressed in the study within the company's community can be observed by reviewing the arithmetic mean, standard deviation, and percentage as follows:

1. Descriptive Analysis of the Eco-Friendly Innovation Variable: Using the SPSS program, the results of the descriptive analysis of the environmental innovation variable were obtained as follows:

First Dimension: Green Product Innovation:

The researchers extracted the numbers, percentages, arithmetic means, and standard deviations for the most important items of green product innovation from the respondents' perspective in the sample company, as shown in table (1):

Table (1) Results of the First Dimension: Green Product Innovation

Items of Green Product Innovation	Arithmetic Mean	Standard Deviation	Percentage
X1-1	4.19	0.756	83.80%
X1-2	3.74	0.883	74.71%
X1-3	3.71	0.978	74.21%
X1-4	3.53	1.133	70.58%
Average	3.79	0.93	75.80%

Source: prepared by researchers using SPSS

It is clear from the data in Table (1) that the results of the arithmetic mean exceeded all the items of the scale for the hypothetical mean of (3) (on the five-point Likert scale) with an importance percentage of (75.8%). This indicates the prevalence of all items in the surveyed company. Furthermore, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

Second Dimension: Green Process Innovation:

The researchers extracted the numbers, percentages, arithmetic means, and standard deviations for the most important items of green process innovation from the respondents' perspective in the sample company, as shown in table (2):

Table (2) Results of the Second Dimension: Green Process Innovation

Green Process Innovation Items	Arithmetic Mean	Standard Deviation	Percentage
X2-1	3.56	1.007	71.24%
X2-2	3.57	0.956	71.40%
X2-3	3.77	1.039	75.37%
X2-4	3.77	0.955	75.37%
Average	3.65	0.994	73.09%

Source: prepared by researchers using SPSS

It is clear from the data in Table (2) that the results of the arithmetic mean exceeded all the items of the scale for the hypothetical mean of (3) (on the five-point Likert scale) with an importance percentage of (73.09%). This indicates the prevalence of all items in the surveyed company. Furthermore, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

2. Descriptive Analysis of the Dependent Variable: Environmental Sustainability

Using the SPSS program, the descriptive analysis results for the environmental sustainability variable were obtained as follows:

Dimension 1: Pollution Reduction

The researchers extracted the counts, percentages, arithmetic means, and standard deviations for the key items of pollution reduction from the respondents' perspectives in the sample company, as shown in Table (3).

Table (3) **Results** of Dimension 1: Pollution Reduction

Pollution Reduction Items	Arithmetic Mean	Standard Deviation	Percentage
Y1-1	3.87	0.903	77.4%
Y1-2	3.57	0.956	71.4%
Y1-3	3.72	0.951	74.4%
Y1-4	3.54	0.841	70.8%
Y1-5	3.98	1.033	79.6%
Y1-6	3.94	0.859	78.8%
Y1-7	3.60	1.013	72.0%
Y1-8	3.72	0.977	74.4%
Average	3.7425	0.94163	74.85%

Source: prepared by researchers using SPSS

It is clear from the data in Table (3) that the arithmetic mean results exceeded all the items of the scale for the hypothetical mean of (4) (on the five-point Likert scale) with an importance percentage of (74.85%). This indicates the prevalence of all items in the surveyed company. Furthermore, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

Dimension 2: Resource Consumption Rationalization

The researchers extracted the counts, percentages, arithmetic means, and standard deviations for the key items of resource consumption rationalization from the respondents' perspectives in the sample company, as shown in Table (4).

Table (4) Results of Dimension 2: Resource Consumption Rationalization

Resource Consumption Rationalization Items	Arithmetic Mean	Standard Deviation	Percentage
Y2-1	3.714	1.566	74.28%
Y2-2	3.8	1.188	76.0%
Y2-3	3.72	0.951	74.4%
Y2-4	4.04	0.841	80.8%
Y2-5	3.56	0.991	71.2%
Y2-6	3.88	0.976	77.6%

Resource Consumption Rationalization Items	Arithmetic Mean	Standard Deviation	Percentage
Average	3.55	1.095	71%

Source: prepared by researchers using SPSS

It is evident from the data in Table (4) that the arithmetic mean results exceeded all the items of the scale for the hypothetical mean of (0) (on the five-point Likert scale) with an importance percentage of (73.33%). This indicates the prevalence of all items in the surveyed company. Additionally, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

Dimension 3: Reducing Impact on Human Health

Reducing the impact on human health is an important element for the organizations in the study sample, as shown in Table (5).

Table (5) Results of Dimension 3: Reducing Impact on Human Health

Reducing Impact on Human Health Items	Arithmetic Mean	Standard Deviation	Percentage
Y3-1	3.8	1.054	76.0%
Y3-2	3.74	1.013	74.8%
Y3-3	3.8	1.054	78.6%
Y3-4	3.62	1.164	72.4%
Y3-5	3.52	1.065	70.4%
Y3-6	3.93	0.887	78.6%
Average	3.75667	1.034	75.13%

Source: prepared by researchers using SPSS

It is evident from the data in Table (5) that the arithmetic mean results exceeded all the items of the scale for the hypothetical mean of (0) (on the five-point Likert scale) with an importance percentage of (75%). This indicates the prevalence of all items in the surveyed company. Additionally, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

Dimension 4: Use of Renewable Energy

Through the study sample, the researchers extracted the percentages, arithmetic means, and standard deviations for the key items of renewable energy use from the respondents' perspectives in the sample company in the Iraqi environment, as shown in Table (6).

Table (6) Results of Dimension 4: Use of Renewable Energy

Renewable Energy Use Items	Arithmetic Mean	Standard Deviation	Coefficient of Variation	Percentage
Y4-1	3.73	1.200	1.095	74.55%
Y4-2	3.82	1.217	1.103	76.36%
Y4-3	3.64	1.083	1.041	72.73%
Y4-4	3.62	1.354	1.164	72.40%
Y4-5	3.34	1.226	1.107	66.78%
Average	3.63	1.10	1.22	72.56%

Source: prepared by researchers using SPSS

It is evident from the data in Table (6) that the arithmetic mean results exceeded all the items of the scale for the hypothetical mean of (0) (on the five-point Likert scale) with an importance percentage of (72.5%). This indicates the prevalence of all items in the surveyed company. Additionally, the results of the descriptive analysis showed relatively low values for the standard deviation and the coefficient of variation, indicating consistency in the respondents' responses.

Section Two: Hypothesis Testing

Introduction

To complete the descriptive and diagnostic operations based on the descriptive analysis data and in alignment with the study objectives, this section aims to test the relationships between variables at both the overall index level and the sub-factor level to understand the strength and nature of the relationships. This involves testing the hypotheses using the correlation coefficient and the T-test to assess the significance of the correlations.

First: Correlation Hypotheses

Main Hypothesis 1

The values in Table (7) reflect the correlation relationships between eco-friendly innovation and environmental sustainability at both the overall index level and the sub-factor level. The results indicate that the correlation between eco-friendly innovation and environmental sustainability is positive and significant, with a value of (0.427), and the calculated T-value was greater than the tabular value. Additionally, the significance level was acceptable and less than (0.05), thus confirming the main hypothesis 1. Regarding the sub-hypotheses, they are as follows:

1. Sub-Hypothesis 1: The analytical results indicate a positive and significant correlation between green product innovation and environmental sustainability, with a value of (0.419). The significance level was acceptable and less than (0.05), confirming this hypothesis.
2. Sub-Hypothesis 2: The results show that the correlation between green process innovation and environmental sustainability is positive and significant, with a value of (0.365). The calculated T-value was greater than the tabular value, and the significance level was acceptable and less than (0.05), confirming this hypothesis.

Table (7) Correlation Relationships between Eco-Friendly Innovation and Environmental Sustainability

Variables	Environmental Sustainability	T-Calculated	T-Tabular	Significance Level (0.05)	Significance Level (0.01)
Green Product Innovation	0.419	4.621	1.66	5306	0.000
Green Process Innovation	0.365	3.211	1.66	5306	0.000
Eco-Friendly Innovation (Overall)	0.427	4.725	1.66	5306	0.000

Source: prepared by researchers using SPSS

Second: Influence Relationships

Within the methodological framework for the hypotheses in the previous section and testing the relationships between the study variables, this section examines the influence relationships between the variables, as shown in Table (8) and the following analysis data:

Main Hypothesis 2

The values in Table (8) reflect the influence relationships between eco-friendly innovation and environmental sustainability at both the overall index level and the sub-factor level. The results indicate that there is a significant influence relationship between eco-friendly innovation and environmental sustainability, with an influence value reflected by a Beta value of (0.400). The value of the determination coefficient was (18.3%), indicating a significant relationship as the calculated F-value was greater than the tabular value. Additionally, the significance level was acceptable and less than (0.05), thus confirming the main hypothesis 2. Regarding the sub-hypotheses, they are as follows:

1. Sub-Hypothesis 1: The analytical results indicate a significant influence relationship between green product innovation and environmental sustainability, with an influence value reflected by a Beta value of (0.000). The value of the determination coefficient was (0%), indicating a significant relationship as the calculated F-value was greater than the tabular value. Additionally, the significance level was acceptable and less than (0.05), confirming this hypothesis.
2. Sub-Hypothesis 2: The results show a significant influence relationship between green process innovation and environmental sustainability, with an influence value reflected by a Beta value of (0.318). The value of the determination coefficient was (13.3%), indicating a significant relationship as the calculated F-value was greater than the tabular value. Additionally, the significance level was acceptable and less than (0.05), confirming this hypothesis.

Table (8) Results of Influence Relationships between Eco-Friendly Innovation and Environmental Sustainability

Variables	Beta Value (B)	Determination Coefficient (R^2)	F-Calculated	Significance Level
Green Product Innovation	0.000	0%	> Tabular	< 0.05
Green Process Innovation	0.318	13.3%	> Tabular	< 0.05
Eco-Friendly Innovation (Overall)	0.400	18.3%	> Tabular	< 0.05

Source: prepared by researchers using SPSS

Section Four: Conclusions and Recommendations

First: Conclusions

1. Product Development: The company aims to develop and introduce a large number of products with new forms or services to the market. This reflects the company's commitment to innovation and meeting market demands.
2. Research and Development: The company under study is committed to research and development to generate new ideas for products and services, highlighting the importance of continuous innovation.
3. Green Operations: The company strives to reduce its profit margin to adopt green operations practices. This indicates a focus on sustainability and environmental responsibility.
4. Product Improvement: The company shows a weakness in its ability to make significant improvements and developments to its products. It only makes minor adjustments in product designs that do not effectively increase customer demand. This suggests a need for more substantial development strategies.

5. Impact of Green Product Innovation: The analytical results indicate that green product innovation is the most influential factor among eco-friendly innovation elements in achieving environmental sustainability.

Second: Recommendations

1. Focus on Product Development: Efforts should be concentrated on developing products that meet customer needs and desires without harming the environment. This approach will ensure sustainable growth and customer satisfaction.
2. Promote Environmental Culture: A renewed environmental culture should be promoted among all employees, encouraging them to voluntarily pursue green environmental goals. This can be achieved through regular training and awareness programs.
3. Training Human Resources: Emphasis should be placed on training human resources according to a pre-prepared program with periodic evaluations to identify actual training needs. This ensures that employees are equipped with the necessary skills and knowledge to drive innovation and sustainability.
4. Regular Product Development Program: The company should adopt a systematic program for product development based on sound planning at all stages, aiming for substantial improvements in product design that align with the evolving needs and desires of customers.
5. Support Creative and Innovative Employees: It is essential to support employees with creative and innovative ideas, providing them with the resources and encouragement needed to develop new and improved products.
6. Adopt and Implement Green Products: The company should widely adopt green products and work on applying their principles extensively. This will contribute to environmental sustainability and enhance the company's reputation as a leader in eco-friendly practices.

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