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The Possibility of Developing the Performance of Green Products in the General Company for Electrical and Electronic Industries / Baghdad - Al-Waziriyah

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Abstract

The problem of the study was the absence of a knowledge product about the development of the performance of green products in Iraqi companies or others, especially in the field of electrical and electronic industries, and this indicates the existence of a knowledge gap. The current study aims to test the possibility of developing the performance of green products in the company under study, as an attempt to fill the knowledge gap in explaining the nature of the relationship through a survey of the opinions of a group of individuals working in the company under study. To achieve this goal, the current study concluded that developing the performance of green products helps organizations move towards environmental sustainability Green products have become a powerful competitive weapon in the market because more customers are becoming concerned about the environment and more customers are willing to pay more for green products. We conclude from the results of the study that the company is under study to pay great attention to the development of environmentally friendly products, and this reinforces the problem of the current study. In order to develop the performance of the General Company for Electrical and Electronic Industries and improve its competitive position, we suggest that the company develop the performance of its green products on a large scale.

Keywords: Green Product Performance Improvement.

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Introduction

The environment is becoming more and more common due to devastating environmental pollution and global warming, so more companies are willing to proactively develop green product performance as customers pay more attention to the prevalence of environmental issues such that consumer environment is more common in the world, companies must actively adopt environmental management to comply For the environmental trend in order to enhance its green image and competitive advantages, the development of green product performance has become a powerful competitive weapon, as customers have shown more interest in the environment and green products have become more prevalent in the market. Companies can undertake to develop product performance.

Green, not only to develop a differentiation strategy, but also to meet the environmental needs in the market, the concept of green product performance development focuses on introducing green products or improving existing products in a way that not only meets the requirements of customers in terms of quality but also results in environmental performance by practicing green products.

Research Methodology

The research methodology includes the problem, importance and objectives, as well as the research hypothesis and my agencies:

1. The Research Problem: The research problem lies in defining the General Company for Electrical and Electronic Industries (Baghdad - Al-Waziriyah) with the concept of developing the performance of green products and on the advantages that the company obtains through the application of the concept. Performance of green products in the General Company for Electrical and Electronic Industries).

2. The Importance of the Research: The importance of the research comes through the researcher's attempt to provide a theoretical framework that demonstrates the possibility of developing the performance of products in the General Company for Electrical and Electronic Industries (Baghdad - Al-Waziriyah), as most Iraqi organizations need to comply with international requirements by providing environmentally friendly green products, This is done through a contemporary concept represented in developing the performance of green products in the company.

3. Research Objectives: By defining the research problem and its importance, it is possible through this to determine the research objective, which mainly focuses on identifying the level of availability of green product performance development in the General Company for Electrical and Electronic Industries (Baghdad - Al-Waziriyah) from the point of view of a number of respondents.

4. Research Hypothesis: The research formulates its hypothesis from its presented questions and in line with its objectives according to a main hypothesis that (the management of the company under research seeks to develop the performance of green products in the company).

The Theoretical Side

1. Evolution of Green Products

Many business organizations have begun to reconsider the social and ethical responsibility in their marketing practices, by giving a prominent importance to the environmental dimension in their marketing strategy, and therefore the success of business organizations depends on the extent to which they respond to the needs and desires of customers on the one hand and the preservation of the environment on the other hand, hence the interest in With a new concept in marketing and known as the green product, which revolves around a strong commitment to environmental responsibility in the production of safe and pollution-free products. From here, we note that organizations have begun to produce environmentally friendly products where they are more correct and do not emit harmful substances to the environment, and this will only be achieved by providing green products, which are the guarantee of the success and survival of organizations As well as reaching customer satisfaction, as products are an important element in the effective marketing mix. If the product fails in the market, this will inevitably lead to the organization's failure to develop the concept of green marketing. Environmental considerations play a prominent role in directing productive and consumer behaviors, and this is what made marketers work on developing the concept of the product to keep pace with environmental issues and contribute to the competitiveness of the organization. Based on the needs and desires of customers, and then develops the necessary strategies to meet these needs in the best way to achieve the goals of the organization (Elias Woodefrow, 2017).

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2. The Concept of Green Products

The word green has been used as a shorthand for something that can significantly improve the environmental situation, as it refers to the product, industry, or organization that conserve energy and resources, produce clean and renewable energy, reduce waste, remove harmful substances, and preserve the environment from pollution. Modern concepts in all developed and developing countries, where green products or environmentally friendly products work to protect the environment by reducing emissions and waste, the product's ability to be recycled, and the conservation of energy and resources (Belhamir and Kunduz, 2015). From the point of view of (Baker Michel, 2000), green products are products that have positive properties and qualities towards the environment, and these characteristics and qualities may be in its components or stages of manufacture, even in its uses and performance, as well as even after its disposal at the end of its life span. Peattie defined green products as those products that meet the needs and desires of the customer, are socially acceptable and are produced in a sustainable manner. (Zsolnai, 2002) believes that the green product is the product that bears responsibility for the environment during its life cycle starting from design, manufacture, sale and distribution until it reaches the final customer and also the disposal of waste. The green product is the product Made of recyclable materials, it is non-toxic and consumes the least amount of packaging materials that have a negative impact on the environment (Ottman, 2005). Green products can be designed, manufactured and the production process carried out more efficiently by using the right raw materials and less energy while taking into consideration the environmental issues (Parkash, 2002).

3. Characteristics of Green Products

The characteristics of green products appear through the organization's relationship with the natural, social and economic environment, where (Major, 2013) sees that green products are distinguished from other products by a set of characteristics shown as follows:

A. Distinguishing green products by having the ability to be recycled or reused compared to other products.
B. The ability of green products to biodegrade.
C. Green products have natural ingredients that do not harm or pollute the environment. They are also characterized by chemical components that are non-toxic and do not harm human life during the stages of their life cycle.
D. Green products consist of environmentally friendly materials that can be used again compared to competitors' products.

4. Design of Green Products

Products gain great importance in the field of green marketing because most efforts calling for an environmental orientation are focused on products, as this requires coordination and cooperation between the marketing and production department, meaning that the marketing department must provide information related to the preferences and expectations of green customers, as well as the production department to agree between environmental standards. Required with the available technical standards so that the most appropriate method for producing and presenting these products can be reached (Al-Bakri and Al-Nouri, 2009).

From here, green design can be defined as those practices owned by the organization that result in products with less negative environmental impacts, from the point of view of (Kasra and Shaima, 2012) when designing green products, a set of issues must be taken into account:

1. The economic impact of the product design on organizations and the selection of the best design for organizations and customers after making environmental modifications to the products.
2. Study the life cycle of the product completely, starting with the raw materials, then the manufacturing process and the use of the product even after its use, in order to reduce negative environmental impacts in all stages of the product life cycle.
3. Knowing the extent to which the designed product is compatible with the needs and desires of customers, i.e. the product must match their needs in order to be acquired.

5. Development of the Performance of Green Products

He proposed a new concept, "Developing the performance of green products", and it is defined as "the development of performance of products that have less impact on the environment, are less harmful to human health, or are made partly from recycled components, are manufactured in a more energy-conserving way, or are supplied to the market in packaging Less (Chen & Cheng, 2012) The success of product performance development lies in creating products whose essential features can meet the needs of customers and other internal and external stakeholders Product stewardship efforts include all aspects of product functions and effects through product life cycle analysis. Since

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environmental protection is rapidly becoming a major issue due to the impact of catastrophic environmental pollution and global warming at present, More organizations are willing to develop green products. The successful development of green products can help organizations move towards environmental sustainability. Green products have become a powerful competitive weapon in the market because more customers are becoming concerned about the environment and more people are willing to pay more for green products. Customers are increasingly interested in environmental issues because they are becoming more aware of the destructive toxic environmental waste resulting from industrial manufacturing activities in the whole world. So more customers want to pay more attention to green products, more organizations are redesigning and redeveloping their products into environmentally friendly products. Green product performance development plays an important role in determining sales of green products. Green product performance development can not only establish a differentiation strategy by meeting environmental needs, but also reshape the marketing rules of the market. There are four distinct differences between traditional product development and green product performance development which include a broader consideration of environmental concerns, focus on product life cycle analysis, and focus on design for specific applications. After use, focus on the social and environmental impacts of the entire supply chain, so the determinants of green product performance development are different from those of traditional product development. Green product development also plays an important role for organizations to respond effectively to the environmental challenge. Many customers are aware of environmental issues and will not hesitate to take action against organizations that are considered environmentally irresponsible. Besides, customers note the importance of environmental protection such that the consumer environment is more widespread and the environmental regulations are more stringent in the world. Ultimately, the public is eager to buy green products. Which does not harm the environment. The development of green products is more important for organizations and has become an important part of business management. In the environmental age, organizations must accept environmental protection as their social responsibility, because environmental challenges can become green opportunities that motivate them to adopt environmental management in order to enhance their competitive advantages and green images. Previous literature indicates that it is important for organizations to incorporate green ideas into the product performance development process to create a win-win solution for both organizations and society. Product performance improvement will not contribute to the pursuit of sustainability unless it can provide viable “green” product options to customers, as the public has become aware of environmental issues (Chen & Cheng, 2012).

The Field Side

Confirmatory Factor Analysis

To find out the amount of variance between the observed variables and the extent to which each paragraph represents the main and sub-dimension, a confirmatory factor analysis was conducted, as it is required in this test that the sample size be greater than 200 items and this is verified (Kline, 2011). The confirmatory factor analysis is used to identify the strength of the study's building scales, which were adopted from previous measures. Confirmatory factor analysis is also used for the purpose of ascertaining the hypothetical structure for constructing measures derived from measures already prepared and used in this field. A number of indicators were used:

1. The ratio of Chi-square/df whose value is preferably less than (2) (Arbuckle, 2006; Widman & Thomson 2003).
2. RMSEA root mean square error of approximation, whose value should range between (.05 to.08) (Arbuckle, 2006; Browne and Cudeck, 1993).
3. Comparative fit index (CFI), normed fit index (NFI), incremental fit index (IFI). It is preferred that the three indicators exceed the value of (.90). (Widman & Thomson 2003; Hair et al., 2010).

Confirmatory Factor Analysis of the Variable Performance Development of Green Products

Relying on the Structural Equation Modeling method, the matching quality criteria were tested for the dependent variable component (13) paragraphs of as in Figure (1) below:

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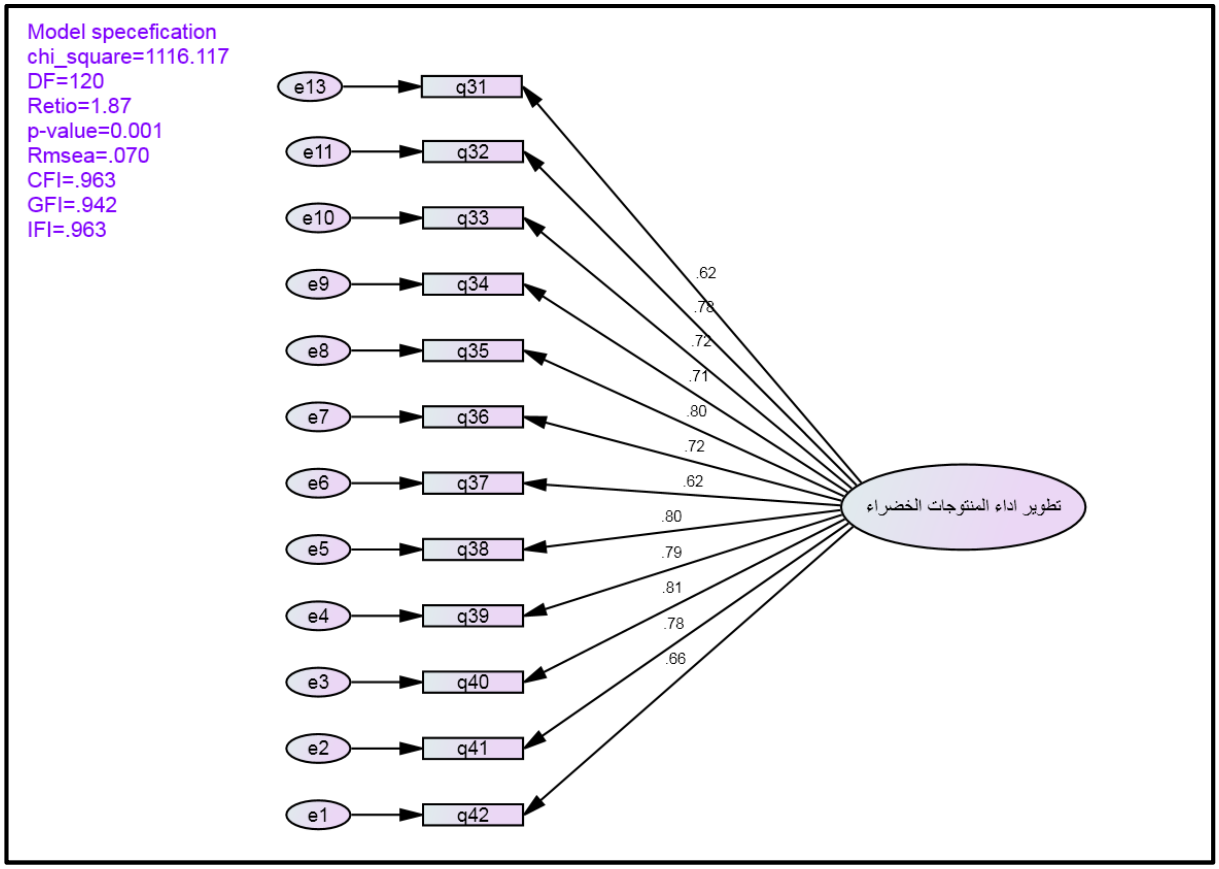


Figure 1: Confirmatory Factor Analysis of the Variable Performance Development of Green Products

Source: Amos v. output. 25

As shown in Figure (1) above, the indicators of quality of conformity standards (Rmsea = 0.070; p-value = 0.001; GFI = 0.942; CFI = 0.963; IFI = 0.963) are all within the limits of acceptability, as all the ratings of the scale items were acceptable when C.R is greater than 1.96, as in Table (1):

Table 1: Estimates of the Performance Development Variable for Green Products

Item	Estimate	S.E.	C.R.	P	Cronbach's α
q42	.664	.081	15.119	***	**.932**
q41	.784	.085	14.891	***	
q40	.813	.093	15.352	***	
q39	.795	.079	15.069	***	
q38	.797	.081	15.099	***	
q37	.618	.069	12.084	***	
q36	.717	.076	13.789	***	
q35	.798	.081	15.119	***	
q34	.713	.076	13.725	***	
q33	.721	.086	13.857	***	
q32	.780	.081	14.830	***	
q31	.623	.078	12.186	***	

Source: SPSS output. V.24 & Amos v. 24

Descriptive Statistical Analysis of the Dependent Variable (Developing the Performance of Green Products

This variable was represented by (13) items, the mean (mean) and standard deviation (S.D) were used for the purpose of evaluating the responses of the current study sample. Table No. (2) shows the results obtained, as follows.

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Table 2: Statistical Description of the Variable (Developing the Performance of Green Products

Paragraph	Mean	Std. Deviation
Green product performance development contributes as a major source of company revenue.	2.7129	1.83429
Improving the performance of green products leads to the development of excellent green products	2.9713	1.83155
Green product performance development continually improves development processes over time	3.8852	.90735
Green product performance development is more innovative in green product development than its competitors.	2.9034	1.83045
The development of green product performance can meet its environmental objectives in the development of green products	2.9522	1.87024
Green product performance development selects the product materials that produce the least pollution to conduct product development or design.	2.9713	1.90359
Green product performance development selects the product materials that consume the least amount of energy and resources to conduct product development or design.	2.8900	1.74830
Green product performance development uses the least amount of materials that make up a product to conduct product development or design.	3.9426	1.73808
Green product performance development will carefully consider whether the product can be easily recycled, reused, and degraded to conduct product development or design	2.7895	1.70961
The operation process developed by the Green Products Performance Development Project effectively reduces the emission of hazardous substances or waste	2.7273	1.85332
The operation process developed by the Green Product Performance Improvement Project recycles waste and emissions allowing it to be treated and reused	2.9234	1.83429
The operation process developed by the Green Product Performance Development Project reduces the consumption of water, electricity, coal or oil	3.7225	1.83177
The operation process developed by the Green Product Performance Development Project reduces the use of raw materials.	26890	1.91143
Green product performance development	2.8599	1.59672

Source: Prepared by the researcher using SPSS v.24.

It is clear from the results of the above table (1) that the general arithmetic mean for the variable of developing the performance of green products has reached (2.86), and with a general standard deviation of (1.60), which indicates that the data are homogeneous, and since the general arithmetic mean is less than the hypothetical mean of (3) The level of green product development in the company is below average according to the respondents' point of view. This indicates that the company does not attach great importance to the development of an environmentally friendly product, and this reinforces the problem of the current study The company's management is to develop the performance of green products and consider them a major source of revenue and to work on improving the development processes continuously over time, as the development of the performance of green products contributes to using a smaller amount of materials that make up the product to conduct product development or design. And the operating process developed by the green product performance development project reduces Water, electricity, coal or oil consumption, waste recycling and emissions

Conclusions

1. We conclude from the results of the study that the company is under study to pay great attention to developing environmentally friendly products and this reinforces the problem of the current study. The company's management should develop the performance of green products and consider them as a major source of revenue and work to improve the development processes continuously over time.
2. The development of green products performance helps organizations move towards environmental sustainability, as green products have become a strong competitive weapon in the market because more customers are becoming concerned about the environment and many customers are willing to pay more for green products.
3. The results of the statistical analysis show that the general arithmetic mean is less than the hypothetical mean of the variable of green product performance development. This indicates that the data are

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homogeneous, the level of green product performance development in the company is below the mean according to the respondents' point of view.

Recommendations

1. We suggest to the management of the company under study to develop the performance of its green products and consider them a major source of revenue and to work on improving the development processes continuously over time, and to pay great attention to them, this reinforces the problem of the current study.
2. In order to develop the company's performance and improve its competitive position, it is preferable for the company to introduce environmental modifications to its green products and to apply the technology of spreading the green quality function widely.
3. We suggest the company to produce environmentally friendly products that help and support it in obtaining the ISO international quality certificate, and these products contribute to improving its reputation and image, and it is also preferable for the company to reduce production costs for these products.

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