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# Sustainability of Strategic Entrepreneurship and Its Role in Achieving Green Innovation

## An Analytical Study of the Opinions of Employees of the Khairat Al-Bahr Renewable Energy Company / Baghdad

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**Abstract.** The objective of this study is to investigate the connection between the sustainability of entrepreneurship and the use of its dimensions (systemic thinking efficiency, insightful thinking, normative efficiency, embracing diversity and multiple disciplines, personal efficiency, work efficiency, strategic management) and green innovation through its dimensions (green product innovation, Green Operations Innovation), the survey and analysis questionnaire have been approved for use in this fashion. After administering a questionnaire to all of the employees at Khairat Al-Bahr Business for Renewable Energy in Baghdad (n=44), and then analyzing the results and conducting hypothesis tests based on a variety of statistical indicators with the aid of statistical software (SPSS v.20), (SmartPLS v.3.3.2), we can say that the research sample is representative of the population. After confirming the correctness of the hypotheses, we drew some findings and made some suggestions based on the substantial positive correlation between the sustainability factors of entrepreneurship and green innovation. One of the most important conclusions reached by the research is the need for the organization in question to work on creating a sustainable work environment that supports strategic entrepreneurship by focusing on creative business in the face of challenges and problems, and to set a strategic goal to maintain organizational processes and their quality to achieve green innovation according to a strategy based on creating products Competitive new services, processes, procedures and systems designed to use natural resources at the lowest level and to provide a work environment characterized by the provision and development of products and production processes based on sustainability.

**Keywords:** sustainability of strategic entrepreneurship, green innovation, Khairat Al Bahr Renewable Energy Company / Baghdad

## INTRODUCTION

Strategic entrepreneurship is the outcome of the integration of leadership in the search for environmental opportunities with the field of strategy and the search for advantage to find strategic leadership with the aim of exploiting the new innovations that result from the organization's attempts at unearthing new possibilities on a regular basis. The idea of strategic entrepreneurship's long-term viability is relatively new to the field of management research, but it has quickly risen to the top of the field's priority list. Entrepreneurship is essential to long-term growth and prosperity, but so is an emphasis on strategy and the ability to think strategically, which is especially important in the context of businesses. Businesses in the modern era need to be innovative, competitive, and sustainable if they want to succeed in the creation of wealth and the advancement of their industries (Takhtshahi & Maroofi, 2017). And that this research consists of four main topics, as the first topic focuses on the scientific methodology of research and the second topic is to present the theoretical side of the research variables, the third topic is to present the practical side of the research and finally the fourth topic is to present the most important conclusions and recommendations reached by the research.

## Research Techniques

*In the first place, there is the research challenge.*

Khairat Al Bahr Renewable Energy Company, like other businesses, strives to thrive and expand, and it works hard to create and maintain its strategies in order to maintain its position as the market leader in Iraq's renewable and modern energy sector. However, the company is constantly confronted with new challenges and corporate pressures. Other companies operating in the same sector, which requires them to work on an effective investment of their skill development and absorb technology to excel and compete with rivals by paying attention to technology practices that effectively supports in reducing harmful impact on the environment, and achieving profits to reach superior performance and achieve Sustainability without sacrificing efficiency. As a result, the issue is framed in the following query: (What is the impact of the sustainability of strategic entrepreneurship in achieving green innovation).

*The objectives of the research:*

Given the context of the situation at hand, the primary goals of this investigation are:

1. Highlighting the role of sustainable entrepreneurship and green innovation.
2. Determine the level of understanding and awareness of institutional departments of the importance and role of sustainable strategic entrepreneurship.
3. Contribution of the practical results of the research and its recommendations in conducting deeper studies for those interested in this field by benefiting from them.

*Research Objectives*

The current research seeks to achieve the following objectives:

1. Determine the level of adoption of the researched organization to manage digital human resources and determine the levels of Career agility.
2. Know the characteristics that must be available in for-profit organizations (business organizations) in order to become distinct organizations and occupy a large space in the work environment.
3. Verify the readiness of leaders and employees to activate the plans and strategies for digital human resources management in the dimensions of the Career agility of the researched organization.

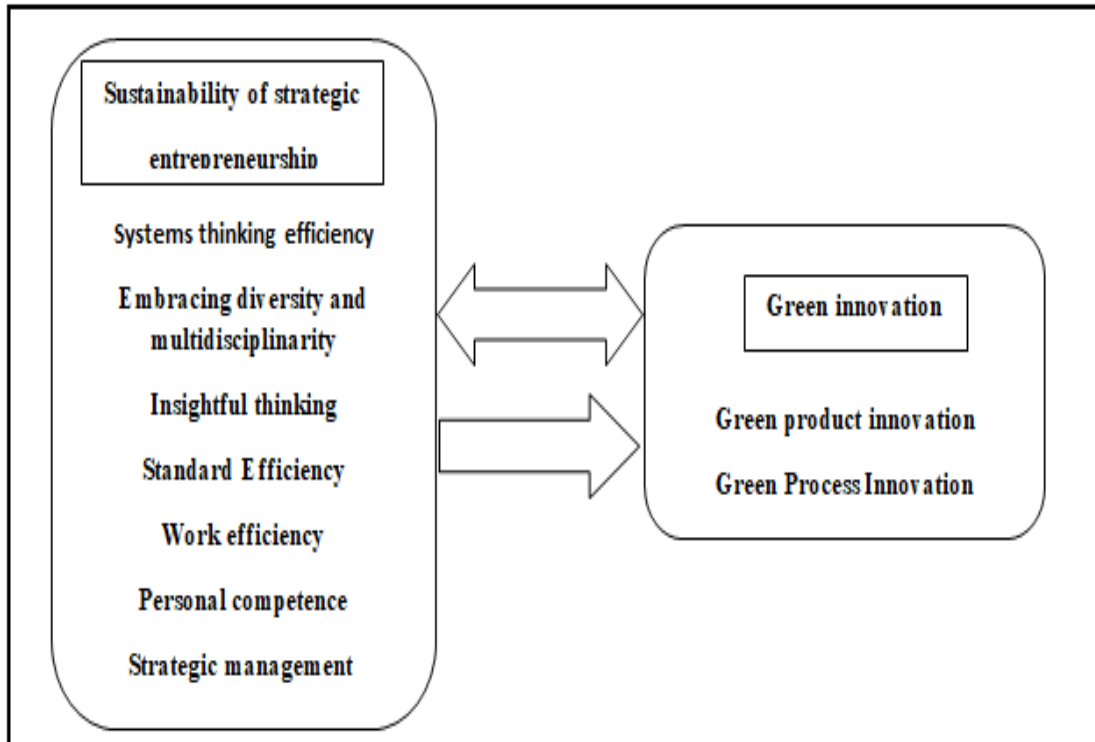
*The value of research*

The two researchers emphasized the significance of their research in two ways, noting that it deals with an essential problem of sustainable strategic entrepreneurship in a crucial sector represented by the people working at the company Khayrat Al-Bahr Renewable Power / Baghdad.

1. First, there is the theoretical (intellectual) side, which encompasses topics like the research of the long-term viability of strategic entrepreneurship and green process innovation.
2. The second dimension, "applied" or "practical," reflects the researchers' effort to serve the company under study by defining the relationship and impact seen between sustainability of entrepreneurship and green innovation so that the company can reap the benefits of the relationship in practice.

*Consideration of a Speculative Research Model*

Based on the paragraphs and contents displayed in the study problem and objectives, a fictitious research model was built, and this model is depicted in Figure (1)



**FIGURE 1.** Hypothesis Research Model

### Research Hypotheses

The following hypotheses were derived from the problem, model, and scope of the study:

The issue statement, theoretical framework, and research objectives led to the following hypotheses:

1. One can look on the bright side and moral correlation with the efficiency of systemic thinking and green innovation.
  - One can look on the bright side and moral correlation between embracing diversity, multidisciplinaryism and green innovation.
  - Visionary thinking and eco-friendly invention are positively correlated.
  - The relationship between conventional efficiency and environmentally friendly advancements is good and statistically enormous.
  - Effectiveness in the workplace and environmentally friendly advancements have a morally commendable relationship.
  - Efficient individuals tend to be more environmentally conscious, and vice versa.
  - Strategic management and environmentally friendly invention have been found to have a good and ethically sound relationship. And green innovation.
2. As for the second primary hypothesis (H2), we predict that the independent variable, strategic entrepreneurship's long-term viability, will have a positive and statistically enormous effect on the dependent variable, green innovation. From this main premise, seven others are derived. Systemic thinking's effectiveness in green innovation is positively correlated with its use.
  - Incorporating different perspectives and knowledge bases into green innovation has a good and sizable influence.
  - Insightful thought is enormously related to beneficial environmental innovation.
  - When it comes to efficiency in green innovation, the standard has a positive and statistically enormous effect.
  - In green innovation, increased productivity is correlated with a positive and statistically enormous effect link.

- Personal effectiveness in green innovation has a positive and statistically enormous influence, and strategic management also has a favorable and statistically enormous effect.

### *Populations and swatches for studies*

The population of the study is a sample of employees at Al-Bahar Renewable Energy Company in the province of Baghdad, one of the most active companies in the sector market

## **REVIEW OF LITERATURE**

### **Sustainability of Strategic Entrepreneurship**

#### *The concept of sustainability of strategic entrepreneurship*

The majority of theories and normative frameworks offered to date for the concept of sustainability of entrepreneurship stem from well-established domains such as social entrepreneurship and environmental economics. As study on the sustainability of strategic entrepreneurship has gained the attention of researchers from an increasing number of disciplines, we are beginning to see a surge of new studies that go beyond the notion that strategic entrepreneurship is sustainable. It is merely a particular kind of social or environmental entrepreneurship. The key concept behind the sustainability of strategic entrepreneurship is that the search of opportunities by entrepreneurs must not harm the natural and social settings in which they operate. To reestablish a balance among nature, society, and economic activity, such ecosystems should be restored or fostered whenever possible. Sustainable business strategy has the ability to effect not only gradual but even revolutionary change. In this way, strategic sustainable entrepreneurs attempt to combine the best of both worlds, i.e., by initiating those processes and procedures that lead to the creation of profitable opportunities while also contributing to sustainable development. Consequently, the sustainability of strategic entrepreneurship can be conceptualized. Sustainable entrepreneurship is the only model ultimately capable of combining economic, social, and environmental value creation with a general concern for the well-being of future generations (Muoz, P., & Cohen, B.2018: 1-2).

While (Jamil et al., 2020) believe that sustainable strategic entrepreneurship is a development that meets the requirements of the present without compromising the capacity of future generations to meet their own needs through strategic management and entrepreneurship. As strategic management concentrates on Competitive edge and entrepreneurship, new ideas are implemented. Therefore, it may be counterproductive to maintain a competitive advantage without employing fresh ideas at work. To compete and preserve sustainability, strategic entrepreneurship can create a competitive edge. The above description emphasizes the equilibrium between the present and the future; thus, the sustainability of strategic entrepreneurship rests on three fundamental elements (social, environmental, and economic).

1. Entrepreneurship sustainability contributes to societal and environmental problem-solving through achieving business success, using economic goals as both means and ends, and integrating sustainable development into goal setting and organizational processes. The sustainability of strategic entrepreneurship is crucial. (Ejemeyovwi et al., 2019: 6).
2. Strategic Entrepreneurship Sustainability aims to achieve goals beyond profit by evolving business to be driven by goals beyond profit in an increasingly complex ecosystem designed to meet financial goals in addition to meeting social and environmental standards of performance, accountability and transparency. (Jamil, et al., 2020: 5).
3. The sustainability of strategic entrepreneurship plays different roles but with a unique and larger aim of improving people's quality of life but this necessarily requires a longer strategic perspective. Through it, it can create long-term value (financial and social value) and (competitive advantage) that allows achieving a social benefit for the community and at the same time achieving its profit goals (Cantele, at, el.2020: 2-5).

## *Dimensions of the sustainability of strategic entrepreneurship*

According to (Lans et al., R.2014: 40-41) a focus on competences and higher-order thinking skills is essential for the sustainability of entrepreneurship. Individual competences for sustainable development have received enormous attention in the sustainability literature during the past few years. On the basis of these investigations, a framework of seven competences has been designed to scientifically apply the characteristics of sustainable strategic entrepreneurship, comprising (the efficiency of systems thinking, the efficiency of cognitive learning, normative efficiency, and accepting diversity). And the following various disciplines, personal competency, job efficiency, and strategic management:

1. **Economical systems thinking:** The issues surrounding sustainable development (such as climate change, poverty, hunger, and the deterioration of biodiversity) are complex and defy a quick and easy solution. Understanding the interconnections and interdependencies among various (sub)systems, as well as their boundaries, is essential for sustainable development. Cascade effects, inertia, feedback loops, and cultural norms are all examples of interconnected phenomena that can be understood and reflected upon through the application of systems thinking.
2. **Embrace diversity and multidisciplinary approaches:** The challenges of unsustainable development can only be met via collaboration between distinct areas of study and philosophies of life. To be competent in interdisciplinary work, one must be able to effectively structure relationships, recognize the legitimacy of other perspectives in business decision-making processes related to environmental, social, and economic issues, engage all stakeholders, and maximize exchange of ideas and learning across different groups (within and outside the organization) (multiple specializations).
3. **Thirdly, the capacity for insightful collective analysis, evaluation, and the creation of "pictures" of the future, in which the global/global and long-term effects of local/short-term actions on environmental, social, and economic issues are calculated, is essential. This competency encompasses the aptitudes of imagination, foresight, originality, and a harmony of local, global, and temporal considerations.**
4. **Competence in the normative sense: sustainable development is a normative notion that does not describe the world as it is, but as it should be. To be normatively competent, one must be able to identify and integrate sustainability-related values, principles, and goals. Professionals with this expertise can evaluate the (un)sustainability of social systems and work to make them more resilient.**
5. **Worker productivity is a key factor in achieving sustainable development, which also calls for state action, regulation, innovative technology, and efficient economies. An efficient work process is one that successfully involves the individual in taking accountable steps to increase the longevity of social and environmental systems.**
6. **Personal competence number six: the ability to inspire, empower, and coordinate group efforts toward sustainability. Skills like talking to people, working together, negotiating, empathizing, and helping others fall under this category.**
7. **Strategic management, number seven: the capacity for a group to plan and execute projects, interventions, transitions, and strategies that advance sustainable development. The ability to plan (including creating and implementing initiatives, transitions, and transformative leaders who understand towards sustainability), organize (including arranging tasks, people, and other resources), lead (including inspiring and motivating others), and control (including measuring performance, evaluating policies, schemes, action plans, and taking action) are all part of this domain.**

## **Green Innovation**

### *The Concept of Green Innovation*

Effective management and marketing have traditionally placed a premium on innovation, supported by a growing worldwide concern for the environment. The onus is on businesses to prove they can improve their performance while also being environmentally responsible. Green innovation is defined in the literature as the introduction of a novel or considerably enhanced process, technology, system, or practice with the goal of minimizing negative impacts on the environment and maximizing business success. Incorporating green innovation into staff development programs can boost employee capacities in a variety of ways, including by assisting teams in

waste reduction, resource optimization, product creation, and environmental sustainability initiatives (Muhammad et al., 2022: 1). Green technology advancements are crucial in reducing or preventing negative effects on the natural world. The commercial rewards from developing environmentally sustainable products and the financial benefits that might boost competitiveness are two of the most enormous advantages that green technology offer to businesses. Consumers everywhere have expressed a desire and expectation to get more eco-friendly goods and services. It's undeniable that businesses have an urgent need for green innovation because it offers a substantial chance to satisfy client demands without negatively impacting the environment (Albort-Morant et al., 2016: 4913). Environmental innovation, sustainable innovation, and ecological innovation are often used interchangeably because there is no clear boundary between them, and the idea of green innovation is still relatively de-defined in the literature. However, green innovation's overarching goals are tied to technological advancements with environmental benefits, such as new goods or new processes that aid in environmental protection and sustainability (Zhang et al., 2019: 49). Innovation in products, processes, technologies, and management structures that safeguard the natural environment by lowering resource consumption, limiting waste production, and limiting pollution is known as "green innovation" (Abbas & Sagsan, 2019: 613). Improvements in a company's hardware or software that are directly related to the development of green products or processes are also considered examples of green innovation (Song & Yu, 2017: 4). Green innovation, also known as environmental innovation, is any kind of innovation that has a positive effect on the environment, whether that effect was intentional or not (Huang & Li, 2015: 3).

### *Dimensions of Green Innovation*

Green innovation is divided into green product innovation and green process innovation:

1. Green New Product: A company's product design, quality, and reliability in regards to environmental concerns can all benefit from green product innovation, giving the company a fighting chance to differentiate its green products, allowing it to command higher prices and higher profit margins. A step in the right direction would be for the corporation to innovate with eco-friendly products. As a result, developing new eco-friendly goods might give a company a leg up in the marketplace (Chang, 2011: 364). When it comes to product design, green innovation is making adjustments to the current iteration of a product in order to mitigate its environmental impact at any point in the product's life cycle (Chiou, 2011: 824). One must adopt a new way of thinking and center their attention on cutting-edge methods while designing with the environment in mind. Incorporating environmentally friendly ideas into product design and packaging is another way for businesses to set themselves apart. As an added bonus, businesses can better meet the environmental demands of consumers and regulators through green product innovation, which also increases the effectiveness of the resources used to produce the desired results. In the context of the environmental impacts of the product life cycle (Huang & Li, 2015: 4).
2. Businesses can save money by implementing green process innovations. Pollution, according to the existing literature, is a visible sign of resource mismanagement. Investing more resources in green process innovation not only reduces production waste, but also enhances resource efficiency (Chang, 2011:364). Green innovation is any adaptation to the manufacturing process that reduces the negative impact on the environment during the acquisition, production and delivery of materials (Chiou, 2011: 824). This innovation can include new technologies to save energy, prevent pollution, recycle waste, or develop corporate environmental management practices that promote sustainability (Song & Yu, 2017: 4). In order to meet the standards set by environmental legislation, businesses must innovate using green processes in order to lower the cost of clean production and cut pollution emissions. To mitigate the negative effects on the environment, businesses that prioritize green innovation can boost productivity while decreasing manufacturing waste (Huang & Li, 2015: 7).

## **THE PRACTICAL ASPECT**

### *Strategies for Conducting Research and Gathering Related Information Method*

The directions and objectives of the study require the adoption of the descriptive-analytical approach, which means describing the features of the phenomenon, and analyzing its dimensions. The minute by it about the



investigated variables, their classification, analysis, interpretation, determining their dimensions, revealing the type of influence between them in Kar cement plant in Najaf, and determining the most important conclusions that help to understand the reality of the plant.

*Testing the study tool (evaluation of the measuring scheme).*

**Criteria for evaluating the measurement model**

The confirmatory factor assessment is the first step in the analysis by the PLS-SEM structural equation modeling method. Table (2) presents the criteria for evaluating the measurement model.

**TABLE 2.** Evaluation criteria of the measurement model

<b>Acceptable Standards and Limits</b>	<b>Measurements</b>
Composite Reliability $\geq 0.60$	Internal Consistency Reliability
Cronbach's Alpha $\geq 0.70$	
Outer Loading $\geq 0.70^*$	Indicator Reliability
(AVE) $\geq 0.50$	Convergent Validity
HTMT $< 0.90$	Discriminant Validity

According to (Hair et al., 2017) it is done:

1. the paragraph is preserved if the saturation is higher than 0.7.
2. delete the paragraph if the saturation is less than 0.4.
3. If the saturation is between 0.7 and 0.4, the effect of deleting the paragraph on raising the rest of the criteria of the measurement model is tested, and in light of this, the paragraph is kept or deleted.

**Evaluation of the measurement model for the sustainability of strategic entrepreneurship variable**

Through the use of the SmartPLS program, the path model was built, and the results of the measurement model evaluation test for the Sustainability of strategic entrepreneurship variable were obtained, which are presented in Table (3) below.

**TABLE 3.** Results of the measuring instrument test for the sustainability of strategic entrepreneurship variable

<b>AVE</b>	<b>Composite Reliability</b>	<b>Cronbach's Alpha</b>	<b>Outer loading</b>	<b>Item</b>
0.552	0.677	0.703	0.724	TE1
			0.753	TE 2
			0.802	TE 3
0.643	0.745	0.762	0.861	DM 1
			0.765	DM 2
			0.755	DM 3
0.600	0.639	0.720	0.734	IT1
			0.762	IT 2
			0.700	IT 3
0.654	0.606	0.741	0.708	SE1
			0.760	SE2
			0.744	SE3
0.613	0.733	0.715	0.711	WE1
			0.746	WE 2
			0.777	WE 3
0.512	0.655	0.739	0.822	PC1
			0.768	PC 2
			0.709	PC 3
0.536	0.661	0.704	0.747	SM1
			0.785	SM 2
			0.701	SM 3

**Source:** SmartPLS3.3.2 outputs

**Here is an explanation of the results of the table:**

1. stability of internal consistency

The Internal Consistency Reliability test performs a reliability test

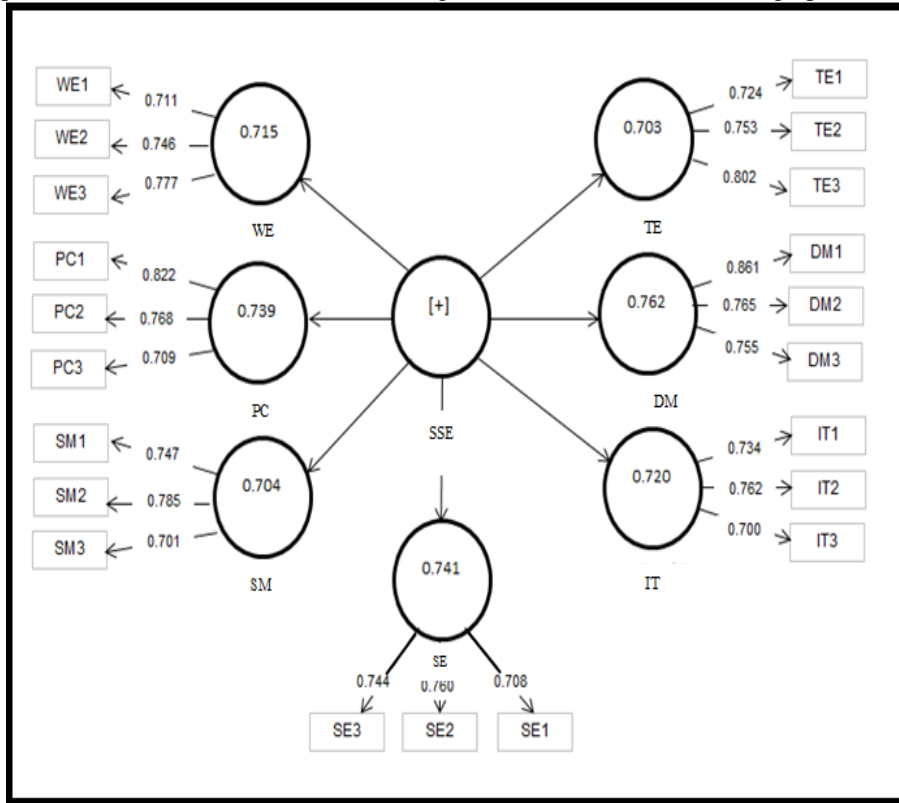
Reliability through two options:

- Composite Reliability whose value should be higher or equal to (0.60)
- Cronbach's Alpha coefficient which must be greater or equal to (0.70).

2. Stability of the indicator (paragraph)

The stability of the Indicator Reliability refers to the Outer Loading box, which performs the factorial analysis of the items of the scale. According to (Hair et al., 2017: 114) there are three procedures in dealing with the values of the items, as follows:

- Saturation is greater or equal to (0.7), in which case the saturation is preserved.
- The commonality between (0.4) and (0.7) in such a case for the researcher to examine the effect of the paragraph on the rest of the criteria for evaluating the measurement model. Paragraph.



**FIGURE 2.** Imperfections and Cronbach's alpha for sustainability of strategic entrepreneurship variable

Through the results presented in Table (3) and Figure (2), it is clear that all the variables and paragraphs fulfilled the criteria for evaluating the measurement model.

For the purpose of verification with discriminatory validity, the HTMT test was conducted using the SmartPLS program, as shown in Table (4).

**TABLE 4. HTMT Test Results**

Sustainability of strategic entrepreneurship	Embracing diversity and multidisciplinary	Systems thinking efficiency	Strategic management	Personal competence	Insightful thinking	Standard efficiency	Work efficiency
							Work efficiency
						0.793	Standard Efficiency
						0.740	Insightful thinking
				0.747	0.716	0.735	Personal competence
				0.719	0.577	0.611	Strategic management
		0.846	0.832	0.788	0.583	0.755	Systems thinking efficiency
		0.749	0.763	0.673	0.745	0.650	Embracing diversity and multidisciplinary
	0.769	0.654	0.522	0.668	0.464	0.722	Sustainability of strategic entrepreneurship

Source: Prepared by researchers based on the results of Smart PLS v.3.3.2

Through Table (4) it is clear that all the variables achieve the acceptable limits of the HTMT standard, and therefore the study tool achieves the discriminatory validity.

Discriminant Validity refers to the extent to which the variable is distinguished through its lack of association with measures of other variables (Hair et al., 2016: 120). According to the partial least squares structural modeling PLS-SEM, the appropriate test for discriminant validity is the measure of the hetero trait to Heterotrait - Monotrait (Ratio) (HTMT), which includes measuring the rate of paragraphs' associations with the rest of the variables to the rate of paragraphs' associations with its original variable. The acceptable values for this test are less than (0.90) according to the rule (Henseler et al., 2015).

### Evaluation of the Measurement Model for the Green Innovation Variable

Through the use of the SmartPLS program, the path model was built, and the results of the measurement model evaluation test for the green innovation variable were obtained, which are presented in Table (5) below.

**TABLE 5. Results of the measuring instrument test for the green innovation variable**

AVE	Composite Reliability	Cronbach's Alpha	Outer loading	Item
			0.742	GPI1
0.549	0.654	0.788	0.735	GPI2
			0.717	GPI3
			0.709	GRI1
0.571	0.670	0.706	0.760	GRI2
			0.755	GRI3

Source: SmartPLS 3.3.2 outputs

**Here is an explanation of the results of the table:**

#### 1. stability of internal consistency

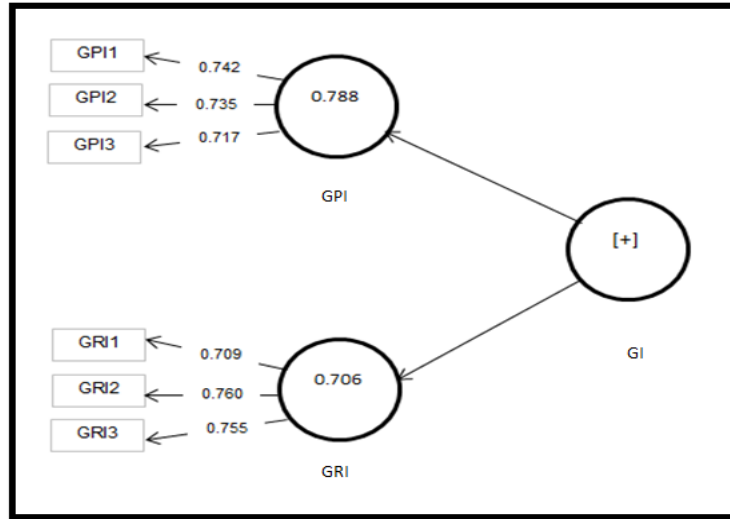
The Internal Consistency Reliability test performs a reliability test Reliability through two options:

- Composite Reliability whose value should be higher or equal to (0.60)
- Cronbach's Alpha coefficient which must be greater or equal to (0.70).

**2. Stability of the indicator (paragraph)**

The stability of the Indicator Reliability refers to the Outer Loading box, which performs the factorial analysis of the items of the scale. According to (Hair et al., 2017: 114) there are three procedures in dealing with the values of the items, as follows:

- Saturation is greater or equal to (0.7), in which case the saturation is preserved.
- The commonality between (0.4) and (0.7) in such a case for the researcher to examine the effect of the paragraph on the rest of the criteria for evaluating the measurement model. Paragraph.



**FIGURE 3.** Imperfections and Cronbach's alpha for green innovation variable

Through the results presented in Table (5) and Figure (3), it is clear that all the variables and paragraphs fulfilled the criteria for evaluating the measurement model.

For the purpose of verification with discriminatory validity, the HTMT test was conducted using the SmartPLS program, as shown in Table (6).

**TABLE 6.** HTMT Test Results

Green innovation	Developing Eco-Friendly Methods	Designing Eco-Friendly New Products	
			Green product development
		0.629	Environmental Innovation
	0.602	0.581	Green technology

**Source:** SmartPLS 3.3.2 outputs

Through Table (6) it is clear that all the variables achieve the acceptable limits of the HTMT standard, and therefore the study tool achieves the discriminatory validity.

Discriminant Validity refers to the extent to which the variable is distinguished through its lack of association with measures of other variables (Hair et al., 2016, p. 120). According to the partial least squares structural modeling PLS-SEM, the appropriate test for discriminant validity is the measure of the hetero trait to Heterotrait - Monotrait (Ratio) (HTMT), which includes measuring the rate of paragraphs' associations with the rest of the variables to the rate of paragraphs' associations with its original variable. The acceptable values for this test are less than (0.90) according to the rule (Henseler et al., 2015).

**Study Hypothesis Test (The Structural Model's Evaluation)**

After completing the first step of the structural equation modeling using the partial least squares PLS-SEM method, the second step is to evaluate the structural model, which includes testing the correlation relationships and

finding the path coefficients through which direct effects can be measured in addition to extracting the value of the interpretation coefficient (R<sup>2</sup>). Which is used to determine the extent to which the independent variable explains the dependent variable.

## Correlation Test

1. Testing the first main hypothesis:

This study's first key hypothesis (H1) proposes that "Sustainability of strategic entrepreneurship is positively and enormously correlated with green innovation." and with regard to proving the validity of this hypothesis, table (7) related to the correlation matrix, showed a enormous and positive correlation between (sustainability of strategic entrepreneurship and green innovation), The value of the correlation coefficient between them reached (0.572) , which is enough to warrant accepting the hypothesis at the 0.01 level of significance.

2. Testing the sub-hypotheses for the first primary supposition:

- A positive and statistically enormous relationship exists between Systems thinking and eco-friendly breakthroughs:
- The correlation matrix-related Table (7) demonstrates that Systems thinking is positively connected with eco-friendly advances. At the level of significance (0.01), the coefficient of correlation between them reached (0.365), requiring acceptance of the hypothesis.
- There is a morally good relationship between showing respect and multidisciplinary and innovation performance:
- There is a substantial and positive association between Embracing diversity and multidisciplinary and green innovation, as shown in Table (7) of the correlation matrix. The correlation coefficient between them reached (0.278) at the level of significance (0.01), indicating that the hypothesis should be accepted.
- One can look on the bright side and moral correlation between Insightful thinking and green innovation:

Table (7), related to the correlation matrix, shows that there is a enormous and positive correlation between Insightful thinking and green innovation. The value of the correlation coefficient between them reached (0.440) at the level of significance (0.01), and this calls for acceptance of the hypothesis.

- One can look on the bright side and moral correlation between Standard efficiency and green innovation:

Table (7), related to the correlation matrix, shows that there is a enormous and positive correlation between Standard efficiency and green innovation. The value of the correlation coefficient between them reached (0.385) at the level of significance (0.01), and this calls for acceptance of the hypothesis.

- One can look on the bright side and moral correlation between Work efficiency and green innovation:

Work efficiency and green process innovation have a enormous and positive link, as shown in Table 7 of the correlation matrix. The correlation coefficient between them reached (0.433) at the level of significance (0.01), indicating that the hypothesis should be accepted.

- There is a morally favorable relationship between Personal Competence and Green Innovation:

Personal competency and green innovation have a enormous and positive link, as shown in Table 7 of the correlation matrix. At the threshold of significance (0.01), the correlation coefficient between them reached (0.417), requiring acceptance of the hypothesis.

- Strategic management and environmentally responsible progress go hand in hand;

The linear relationship (Table 7) demonstrates a favorable and statistically enormous relationship between Strategic management and green innovation. The theory is supported by the fact that their correlation coefficient is (0.355) at the 0.01% level of significance

**TABLE 7.** The correlation matrix between Sustainability of strategic entrepreneurship and green innovation

Strategic management	Personal competence	Work efficiency	Standard Efficiency	Insightful thinking	diversity and multiplicity Systems thinking	efficiency	Sustainability of strategic	green innovation
0.355	0.417	0.433	0.385	0.440	0.278	0.365	0.572	
0.000	0.000	0.000	0.003	0.000	0.021	0.000	0.000	p Value

Source: SPSS v.26 outputs

## Impact Test

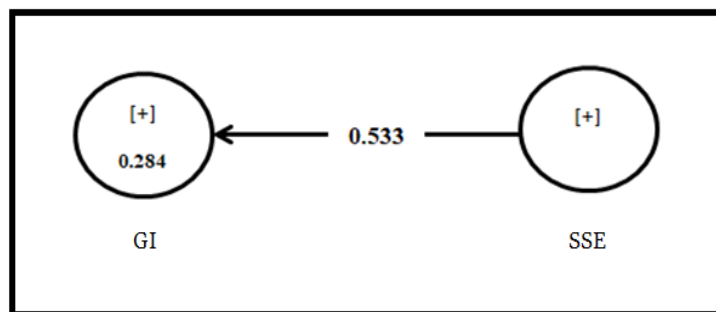
### Testing the Second Main Hypothesis

This topic includes evaluating the structural model, which consists of the criteria shown in Table (8).

**TABLE 8.** Criteria for evaluating the structural model

acceptable limit	Standard
VIF < 5	Linear Correlation Assessment VIF
T value > 1.96 P value < 0.05	Significance of path coefficients
Indicates the effect of small, medium, large 0.25, 0.50, 0.75	The coefficient of determination $R^2$
Indicates the effect of small, medium, large 0.02, 0.15, 0.35	Effect size $f^2$

- 1.1. **This leads us to our second primary hypothesis (H2), which is that:** The central hypothesis proposes testing the assumption that the independent variable (Sustainability of strategic entrepreneurship) has a positive and enormous influence on the dependent variable (Green innovation). The examination of the structural model for this hypothesis is displayed in Figure Table (9).



**FIGURE 4.** The structural model for testing the Second main hypothesis

**TABLE 9.** Results of the evaluation of the main hypothesis model

R <sup>2</sup> Adjusted	Determination parameter R <sup>2</sup>	Effect size f <sup>2</sup>	The result	p Value	t Value	path parameter	VIF	path	Hypothesis
0.278	0.284	0.369	Accept	0.000	6.184	0.533	1	SSE → GI	H2

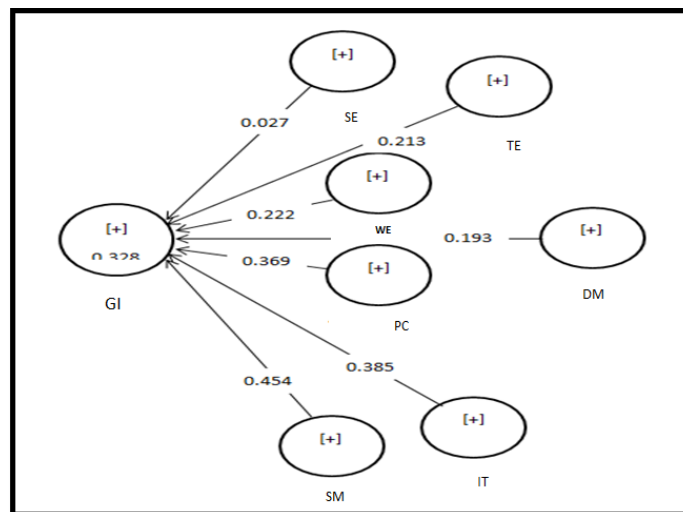
**Source:** SmartPLS 3.3.2 outputs

The outcomes of the primary hypothesis' structural model examination are shown in Table (9), which concluded that the path coefficient (influence) reached (0.533), which is enormous when the (t) value exceeds 1.96 and the (P) value does not exceed 0.05 according to the rule of (Hair et al., 2017). The Table shows that the required limits are met, and therefore, this hypothesis is accepted.

In addition, the adjusted coefficient of determination indicated a value of 278.1%, indicating that the independent variable was enormously associated with the outcome (Sustainability of strategic entrepreneurship) was able to explain the dependent variable (Green innovation) at a rate of 27.8%. The rest of the percentage are other factors that the study did not address.

### Sub-Hypothesis Testing of the Second Main Hypothesis

- The sub-hypotheses of the second main hypothesis (H2-1, H2-2, H2-3, H2-4, H2-5, H2-6, H2-7) state the following:
  - (H2-1) One can look on the bright side and enormous effect relationship for Systems thinking efficiency in green innovation.
  - (H2-2) One can look on the bright side and enormous effect relationship for Embracing diversity and multidisciplinary in green innovation.
  - (H2-3) One can look on the bright side and enormous influence relationship for Insightful thinking in green innovation.
  - (H2-4) One can look on the bright side and enormous influence relationship of Standard Efficiency on green innovation.
  - (H2-5) There is a positive, enormous effect of Work efficiency on green innovation.
  - (H2-6) There is a positive, enormous effect of Personal competence on green innovation.
  - (H2-7) There is a positive, enormous effect of Strategic management on green innovation.



**FIGURE 5.** The structural model for testing the sub-hypotheses of the Second main hypothesis

**TABLE 10.** Results of the evaluation of the sub-hypotheses model for the Second main hypothesis

<b>R<sup>2</sup> Adjusted</b>	<b>Determination parameter R<sup>2</sup></b>	<b>Effect size f<sup>2</sup></b>	<b>The result</b>	<b>p Value</b>	<b>t Value</b>	<b>path parameter</b>	<b>VIF</b>	<b>path</b>	<b>Hypothesis</b>
0.322	0.328	0.103	Accept	0.000	3.770	0.213	1	TE → GI	H2-1
		0.087	Accept	0.003	2.546	0.193	1	DM → GI	H2-2
		0.175	Accept	0.000	4.387	0.385	1	IT → GI	H2-3
		0.006	Refuse	0.068	0.307	0.027	1	SE → GI	H2-4
		0.069	Accept	0.021	2.565	0.222	1	WE → GI	H2-5
		0.211	Accept	0.000	5.786	0.369	1	PC → GI	H2-6
		0.284	Accept	0.000	4.421	0.454	1	SM → GI	H2-7

Source: SmartPLS 3.3.2 outputs

The assessment of the conceptual framework for the secondary hypotheses of the second main hypothesis is shown in Table (9), with the route coefficients for the secondary hypotheses concluding that (H2-1, H2-2, H2-3, H2-5, H2-6, H2-7) are enormous, which It is enormous when the value of (t) exceeds 1.96 and the value of (P) does not exceed 0.05 according to the rule (Hair et al., 2017), while the path coefficient of the hypothesis (H2-4) is not enormous, and through the table it is clear that the hypotheses are accepted (H2-1, H2-2, H2-3, H2-5, H2-6, H2-7), and hypothesis rejected (H2-4). The results also showed that the values of the adjusted The correlation coefficient value was 0.322, indicating that the dimensions of the independent variable are moderate (sustainability of strategic entrepreneurship) were able to explain the dependent variable (green innovation) at a rate of 32.2% and the rest of the percentage are other factors that the study did not address.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

1. According to the results of the statistical study, the company in question has a high level of sustainability in strategic entrepreneurship, and as a result, these organizations can improve the aforementioned variable.
2. According to the statistical findings, the company under investigation has specific orientations towards the green innovation variable, which can be enhanced in the future.
3. The results of the correlation tests indicate that there is a strong moral correlation between the sustainability of strategic entrepreneurship and green innovation in general. This is supported by the correlation between the sub-variables of entrepreneurship and the variable of green innovation, as well as the clear relationship between systemic thinking and green innovation. It is the best outcome for the aforementioned sub dimensions.
4. Green innovation has been positively and morally affected by the sustainability of strategic entrepreneurship.
5. 5-The sub-dimensions of the sustainability of strategic entrepreneurship had a direct influence on the dependent variable (green innovation), with the sub-dimension of green innovation having the greatest influence on operations.

### Suggestions

1. The study suggests enhancing the component connected to the sustainability of organizational innovation within the organization, as well as highlighting their strategic qualities and skills.
2. Ongoing mentoring for employees by means of educational seminars and workshops. This is intended to enhance the skills of employees in order to raise output and increase wealth.
3. Due to the existence of a significant connection between the variables of the study, and in order to boost the researched company's ability to expand its green innovation capabilities, strategic entrepreneurship must be fostered.



4. The company in question should focus on the sustainability of organizational innovation if it wishes to achieve success in the field of green innovation, due to the strength of the relationship between the two variables and their sub-dimensions:

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