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The Green Economy And Its Role In Achieving Sustainable Development

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Abstract:
The green economy is a model of economic development based on the idea of environmental economics and aims to optimize the use of economic resources and reduce resource depletion. The study looked at the links between sustainable development and the green economy to find out what role the green economy plays in making sustainable development happen. To keep the earth safe, fight climate change, and make sure it lasts for a long time, the green economy works. This study is important since these things are true. Stats show that different groups of people with different traits know different amounts about the green economy. The study's results showed that men and women are not as aware of the green economy as they should be. As well as workers in the government sector, where they recorded the highest level of awareness compared to workers in the private sector. Also, according to their educational levels, they graduated from PhD holders to less. Urban dwellers were more aware of the green economy than rural residents. Senior management positions showed the highest level of awareness compared to the rest of the groups. Members of the study sample agree with a high level of response to challenges and obstacles in front of the implementation of the green economy and agree on the role of government policies and institutional support. The resulted is to preparade awareness campaigns targeting the above-mentioned groups to enhance and raise their efficiency in the field of green economy and sustainable development.
Keywords: *green economy, sustainable development, economic growth, global green economy index, environmental performance index.*

1- INTRODUCTION:

In any society, there is an important aspect of achieving sustainable development, which is the search for modern mechanisms to develop its main sectors, foremost of which is the economy, particularly given the challenges facing all countries and societies, which led to the search for the best applications of the green economy, which focuses on the sectors most related to the environment and away from products, industries and behaviors harmful to the natural environment in the country. There are many new words that don't exist before the "green economy." This can be seen in phrases like "green buildings," "green technology," and "organic agriculture." And others, what is known as (green shopping) has been designed, which provides goods to consumers, and support for green products for consumers has been increased and has become popular for projects that take into account the most environmentally friendly aspects, in addition to the launch of the so-called (green banks) that encourage and finance environmental projects. In addition to the above, international economic institutions have become interested in preparing national accounts on the basis of taking into account the environmental dimension within the framework of an environmental-economic accounting system as a measurement framework that supports sustainable development and green economy, and as a framework for evaluating the environment and its relationship to the economy. With the development of countries, it has become necessary to apply the green economy in all fields, including green development, which is related to the preservation of environmental resources for the green economy and achieving sustainable development.

The problem of the study: The problem of the study shows the extent to which there are statistically significant differences in individuals' awareness of the green economy with different characteristics, educational, functional and social levels.

Objective of the study: The study aims to: analyze the concept of green economy and its dimensions, evaluate the role of the green economy in achieving sustainable development goals, study international and regional experiences in the application of green economy.
The importance of the study: facing environmental challenges**,** using natural resources more efficiently**,** reducing pollution of all kinds (air, water, soil), and achieving social justice and sustainable development.
Study hypotheses: The study assumes that there are statistically significant differences in individuals' awareness of the green economy according to their demographic variables (gender, age, educational level, job status, sector, and place of residence).
Think about what you're reading when you look at the books. Find out about the business by using tools for data.

STUDY METHODOLOGY:
This study followed the quantitative descriptive analytical approach, where a questionnaire was designed to collect data from a representative sample of the study population, to find out more about how the green economy is helping the economy grow in a healthy way. This approach was chosen due to its suitability in studying the relationship between variables and testing hypotheses through quantitative analysis. The questionnaire was formulated according to a model based on a theoretical framework that covers the dimensions of awareness of the green economy, economic and environmental drivers, challenges facing the transformation, the role of government policies, and the impact of each on the transition towards a green economy.

STUDY TOOL:
This study relied on the questionnaire as the main tool for collecting data from the sample members, due to its suitability to the nature of the study and its objectives. The questionnaire is designed to cover six main themes: demographic data, awareness of the green economy, economic and environmental drivers, challenges and obstacles, Last but not least, what part do government programs and help from institutions play? How ready are people and groups to make the change to a green economy? The questionnaire was built according to the Likert five-point scale to measure the degree of agreement with the statements presented, which helped in converting the data into quantitative indicators that can be analyzed statistically. The questionnaire consists of a number of basic axes, where each axis includes a set of questions that measure the variables of the study according to the five-point Likert scale, which ranges from (1: strongly disagree) to (5: strongly agree).

2- PREVIOUS STUDIES:

2.1- The study of Dr. Mahmoud Abdel Rahman El-Sayed El-Bahloul, (2023), the importance of the green economy and its impact on the sustainable development of clean energy in Egypt, many problems have emerged, especially with regard to new and renewable energy due to harmful exhausts to the environment, and to accomplish this study, the analytical method was used, in several ways, including: (aggregate method, arithmetic or geometric mean, least squares regression, test, Philips-Peron (PP) Test The current study reached the most important conclusions, through which it became clear that there is a common integration relationship between the variables, and the application of

the error correction model (VECM), Recycling trash could be a great way to make cheap things that can be used in many places, according to the ideas. In addition to taking care of the land and encouraging healthy farming.

2.2- Wissam Darwish's study, The relationship between the green economy and sustainable development, topic, 2023, Long-term growth is one of the most important things that are done to help the green economy grow. Green economies and long-term growth are connected in some ways. Both of these things have to do with taking care of the earth. But making or using nonrenewable energy sources is bad for the earth, so there is no such thing as a green economy or healthy growth. It is important for both sustainable growth and the green economy to figure out how to use things that don't grow back. Because you can only use them in certain ways. The study recommended improving basic infrastructure. Providing clean and safe water, improving solid waste management facilities and providing clean energy sources.

3.2- Sarah Ajroud's study, Green Economy and Sustainable Development, Al-Naqed Journal of Political Studies, 2021. The Arab world needs to grow in a healthy way and protect its natural riches. This is why it's important to have a green economy, relying on the practices of this concept that reduce pollution and maximize production requires concerted efforts for all countries of the Arab world, investing in the green economy Encourages investments in sectors that result in the creation of new job opportunities, for example in the field of energy, which prefers to direct new and renewable energy such as solar and wind energy, A lot of important people said at the end of the talks that they would make sure that all countries had the right conditions for the green economy to grow and that all laws and rules about the environment were brought up to date.

4.2- Lecture by Dr. Jawaher bin Suwaidan, lecture entitled: Green Economy and Sustainable Development, (2024)
Bin Suwaidan said that a green economy is defined as a sustainable approach that aims to achieve economic development in a way that preserves the environment and enhances its sustainability, and represents the environmental dimension of sustainable development.
There are many important economic policies and steps that can be taken to help the green economy. Some of these are policies that support fair and sustainable trade, policies that support organic and sustainable farming, better public transportation systems, and policies that lower harmful emissions from factories and other industrial facilities. Financial incentives should be provided to attract investments in public transport, renewable energy and waste recycling projects in order to promote green infrastructure, and to provide financial support and reduced taxes to companies and individuals who use clean technology in their industrial, agricultural and transport operations.
This study changes along with the green economy and its part in long-term growth. A newer method and sources that are more up to date with the changes are used.

3- THEORETICAL FRAMEWORK:

3.1- Basic concepts of green economy and sustainable development

3.1.1: The concept of green economy:

There are many concepts about the term green economy, where

- There should be enough natural resources for everyone, the economy should grow, and there should be social balance for a green economy to work. There should be less environmental danger, more fair society, and better health and well-being for everyone. (2010) Without

  The UN Green Economy Program sees the green economy as more than just a choice. It sees it as a long-term way to grow.

For the World Bank, a "green economy" is one that doesn't harm the environment as much, makes good use of natural resources, and pollutes less. A "green" economy also saves and takes care of natural resources in a way that doesn't hurt them. This way, everyone can have a better life and there is enough food for everyone. ([i]World Bank, 2022).
He also defined green economy as "a concept that works to reshape and correct economic activities to be more suitable for the environment and development at all levels, so that the green economy ultimately leads to sustainable development" [ii](Ajroud, 2021).
She thinks that the green economy is a new way to help the economy and society by using clean technology to get things back to how they should be.

3.1.2: The importance of the green economy:

The importance of a green economy can be summarized as follows:
Taking care of climate change and damage to the world
Balancing the house of economic growth and environmental preservation.
Creating new job opportunities in green sectors
Improve quality of life and overall health.
It is considered an alternative to renewable energy and low-carbon technologies.[iii](Ben Qara Mustafa, Boukhadmi, 2020, pp. 51-52).
Putting plants in work areas is one way to make better use of different kinds of natural materials. Putting money into and building green sites should also help rates of growth in the long run.[iv](Zayani Bey and Zarwat 2023, p. 53)

3.1.3: General objectives of the green economy:[v] (Mahdhid et al., 2022, p. 05)
Achieving sustainable development.
The green economy aims to eradicate poverty, because investing in green economic sectors makes them more environmentally friendly and helps reduce it, especially in rural areas.
Private government money should be used to fund research and development in green technologies that get the most energy and resources out of them. This will help keep modern growth engines going.

3.1.4: Strategic Objectives of the Green Economy: [vi](Yousry Juhaish et al., 2022)
A green economy promotes the pursuit of poverty alleviation.

- Potential for new job creation

Resource efficiency and energy security.
Reduce waste flows with higher living standards.
Recognize the value of natural capital and invest in it.

3.1.5: Green Economy Indicators:

Global Green Economy Index: https://dualcitizeninc.com/global-green-economy-index)[vii]/)
This is a list of sixteen different things that rate the green economies of 160 different countries. It tells us how close or far each country is to the world goals, the Green Economy Index measures **two main factors**:

1. Progress in each indicator from 2005 to present
2. The difference between the current performance of each country and the performance required to achieve global sustainability goals has four main dimensions as follows:
- Climate change and social justice
- Decarbonization of sectors
- Markets and environmental and social investment
- Governance for the green economy.

Economic indicators:
Encourage investment in renewable energy, environmental technology and policies to reduce harmful emissions from factories and industrial facilities, promote fair and sustainable trade, promote organic and sustainable agriculture, improve public transport systems To help them make money, clean tech and the people who work in it should get tax breaks or returns, and tax environmentally harmful emissions such as carbon dioxide emissions. and other policies to promote the green economy[viii].(Jawaher Bin Suwaidan, 2024)

Social indicators:
This dimension focuses on the fact that the human being is the most benefited from the development process, as it contributes to raising the level of his well-being, and through it he enjoys a decent and appropriate life, in which the elements of social justice are available.

- **Environmental indicators:** ([ix]Abdel Hamid, 2022, p. 419)

Nature should be kept safe, the environment should not get worse, and natural materials should not be used up or dropped. This will also help keep things interesting and in balance biologically. Renewable resources should be made at the same time that resources aren't being used up.

3.2: The nature of sustainable development, its objectives, importance, dimensions:

3.2.1: Definition of Sustainable Development: [x](Arab Network for Excellence and Sustainability)

- The UN said it was "sufficient for all human beings forever." To this point, it means growth that meets the needs of the present without making it harder for future generations to do the same. Nature, people, and money are all looked at in terms of how to make them work together.
- Definition of inclusive sustainability: Everything, from the people to the business to the scenery, is meant to last. We call this long-term growth. Its main goal is to help people get what they want now and plan for what they might want in the future.
- Strong means making things better in the natural, social, and economic worlds. They can keep meeting the needs of the present without getting in the way of meeting the needs of the future. So this is what it means for growth to last.
- Definition of resilience: The goal of sustainable development is to make sure that everyone, even the poor and disadvantaged, can fully and properly take part in society. This is done by giving people what they need, protecting their rights, and letting them make choices.

These are some of the most important things that long-term growth means. It is very important to keep the natural, social, and economic sides of growth in balance.

3.2.2: Dimensions of Sustainable Development:[xi] (Tabarak Fallah, 2022)
Sustainable development consists of three main dimensions, which must be integrated and balanced to achieve comprehensive and sustainable development. There's the business side, the society side, and the nature side.

- The economic dimension of sustainable development aims to improve the standard of living and increase productivity, as research has shown that countries that focus on sustainable development have witnessed a decrease in the level of consumption of energy and natural resources by a certain percentage5. There is also an increase in the uptake of the use of advanced technology in these countries
- The social dimension focuses on achieving social justice and providing basic services for all. Countries committed to the SDGs have seen improvements in health care and education indicators. In contrast, there is an increase in rural-urban migration rates in countries experiencing socioeconomic turmoil.
- The environmental dimension aims to protect the environment, reduce pollution and sustainable use of natural resources. Studies have shown that areas that do not pay sufficient attention to environmental aspects in development programmes suffer from high rates of environmental pollution. In contrast, a high percentage of countries suffer from extreme weather conditions which poses a challenge to achieving sustainability.

[xii]Laith Hamdi (2024) adds two other dimensions:

- Technological dimension:
  When I say "clean technology," I mean technology that is good for the world. That's also why I want people to think about clean energy sources like natural gas, solar, and wind power for their homes and businesses.
- Political dimension: The political system in society should pledge to adopt sustainable development policies, develop strategies to achieve them, and commit to implementing their programs through achievements and legislation that are adhered to.

3.2.3: The importance of sustainable development: [xiii]**(Al-Qasas, 2023)**

- Providing basic human needs.
- Poverty Eradication
- Achieving food security
- Learning
- Gender equality
- Safe Water Assurance
- Economic growth
- Industry, innovation and infrastructure.

3.3- The relationship between the green economy and sustainable development
3.3.1: "Green economy" and "green growth" are linked ideas. The "green economy" tries to lower environmental risks, increase economic growth, and make society more fair and safe. "Green growth," on the other hand, wants to keep natural resources around for a long time. In other words, the "green economy" depends on the growth ideas and plans of "green growth" to last.

Sustainable growth is one of the most important things that is done to help the green economy grow. Activities that are good for the environment are a part of both the green economy and

sustainable development. The green economy is actually based on long-term growth.[xiv](Darwish, 2023)

That person thinks that sustainability and a "green economy" can help find a middle ground between making the economy grow and protecting the environment and natural resources for people now and in the future. The green economy aims to fix the world's environmental, economic, and social problems by making all of us stronger, protecting the earth more, and making life better for everyone.

3.3.2: Green Economy Goals for Sustainable Development:

The transition to a green economy aims to:[xv] (Al-Rifai, 2024)

- Putting together the needs to take care of the land and help people grow in their social, moral, and financial lives.
- It's known as the "green economy," and it helps the economy grow in a way that is good for the earth.
- A "green economy" looks for new ways to grow by making green goods and taking care of local resources in a way that doesn't hurt them. Creating new jobs is good for business, helps poor people, and helps the country deal with climate change.

3.3.3: The benefits of a green economy in the context of sustainable development: [xvi](Ghaith Foundation for Community Development, 2024)

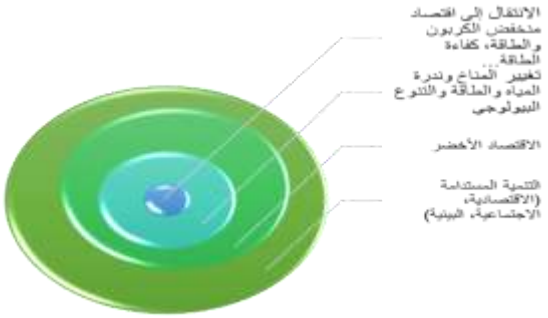
Conservation of natural resources.
Reduce pollution and harmful emissions.
Create new job opportunities.
Cost savings
Promote innovation and technological development.
Promote the sustainability of economic growth.[xvii](Master Class, 2022)

3.3.4: Environmental and economic benefits of the green economy considering achieving sustainable development:

Environmental benefits: Reduce environmental risks, reduce and reduce carbon emissions, preserve biodiversity, reduce water pollution by reducing waste.

Economic benefits: water and energy efficiency, increased volume of public and private investments, production and distribution of goods consumption, increased economic growth, increased income and creation of new job opportunities. [xviii](Youssef, 2022, p. 217).

3.4: Linking Green Economy and Sustainable Development: [xix](Bahloul, 2023)



Source: International Forum, Assessment of Poverty Reduction Policies in the Arab Countries

In light of globalization (Thabet Al-Habib - Brunco Nasira)

The green economy is important for long-term growth because it tries to protect the environment and grow the economy at the same time, according to the expert. To grow, the business needs to support green energy and make good use of its resources.

Green economies do more than just clean up the Earth. It also makes people and groups better and helps them grow over time. Management of natural resources, clean energy, and technology for the environment are some fields that might have more work because of the green economy.

It helps the economy grow and keeps the environment safe without making it harder for future generations to meet their own needs. Thus, it is good for both. Natural gas, coal, and oil are all very high in carbon and fuels. Renewable energy helps us use less of them, which is a big part of a green economy. Also, these energy sources are cleaner because of it. Power comes from things that can be used over and over, like the sun, wind, and water. These sources make power and are good for the earth. This is one of the main goals of the study.

4: RESULTS OF THE ANALYSIS OF THE PROCEDURAL STUDY:

These steps were taken for the field study. There is information about the study's community and group, as well as the method and facts that were used to get them. Besides that, the study's ideas, results, and suggestions were tested, along with the data and the statistical methods used to look at, show, and test it.

4.1: Study population and sample:

The study population consists of all individuals working in the government, private and academic sectors in the Kingdom of Saudi Arabia, who are interested or associated with the topics of green economy and sustainable development, including those working in the fields of energy, environment, agriculture, and industry. As for the study sample, it was selected using the facilitated (non-probability) sample method due to the nature of the study and its reliance on an electronic questionnaire distributed across various communication platforms. The sample size was (92) individuals, to achieve the minimum Accepted for statistical analysis according to the standards followed in social studies. The sample varied in terms of age groups, educational level, and fields of work, to ensure the representation of the largest possible number of segments of society related to the subject of the study.

4.2: Demographic characteristics of the study sample:

In the next line, I'll talk about all of the people in the study's main traits. It will be mostly about the study group as a whole. Some of these traits are age, years of experience, amount of schooling, job title, and business. These traits help us figure out what kind of group it is and how well it speaks for the whole world. For more people, this makes the knowledge stronger and more useful. The table below shows what the study group was like.

Table (1) Characteristics of the study sample (demographic data)

Percentage %	Iteration	Categories	Sample characteristics
9.1	8	male	1/ Type
90.9	84	Female	

10.9	10	Under 25 years old	2/ Age
8.7	8	years 35-25	
33.7	31	years 45-36	
46.7	43	years and above 45	
39.1	36	Associate Diploma / Intermediate Diploma	3/ Educational level
23.3	26	Bachelor	
5.4	5	Master	
27.2	25	Doctorate	
7.6	7	president	4 / Career Center
52.2	48	employee	
10.9	10	Free age	
29.3	27	Other	
76.1	70	city	5/ Place of residence
23.9	22	countryside	
83.7	77	governmental	6/ Sector
16.3	15	special	

Source: Prepared by the researcher from the results of the field study 2025

Table (1) makes it clear that most of the people in the study group are women (90.9%), while the percentage of males in the sample was (9.1%), and we find that the majority of the sample members are from the university and post-university educational level (bachelor's, master's, doctorate) by (60.9%), while the sample members of the educational level (associate diploma / intermediate diploma) reached (39.1). %. It is also noted that the vast percentage of the respondents are between the ages of (46 years and over), where their percentage reached (46.7%), and it is also found that the vast majority of employees, where their percentage reached (52.2), and from the government sector , where their percentage reached (83.7%), while the percentage of the sample members from the private sector (16).3) %. The percentage of respondents from the city was (76.1%), while the percentage of rural residents was (16.3%).

4.3: Test of honesty and reliability of the study instrument:
It's important that the tool you use to gather data is stable before you start to use it. How stable a scale is shows how free of mistakes it is, especially when it comes to random ones. To get proper data and make sure the study tool worked, tests were done to see how honest and good it was.

- **Believe the study tool:**

In measuring the validity of the study tool, the study relied on :

- Test the truthfulness of the content of the scale: Validity test: The validity of the questionnaire was confirmed through the apparent honesty, as it was presented to a group of experts and specialists in economics and artificial intelligence to review the clarity of the questions and their suitability for the subject of study.

- Honesty of internal consistency: The sincerity of internal consistency was also used by analyzing the correlation of each phrase with the axis to which it belongs, which ensures that each axis measures its target concept accurately, and the following table shows the test results.

Table (2): Correlation coefficient for the study axes with the total

Morale level	Correlation coefficient	axles
0.000	0.77	Awareness and knowledge of the green economy
0.005	0.80	Economic and environmental drivers of the transition to a green economy
0.000	0.79	Challenges and barriers to the implementation of the green .economy
0.005	0.74	The Role of Government Policy and Institutional Support
0.000	0.81	The readiness of individuals and institutions to transition to a green economy

Source: Prepared by the researcher from the field study 2025
At the 0.05 level of significance, Table 2 shows that all of the study's axes are statistically significantly tied to the total of the axis they belong to. In other words, the gadget passes all of its tests.

4.4: Stability of Resolution: The stability of the questionnaire was measured using Cronbach's alpha coefficient, which is one of the most common methods for assessing the internal consistency of a tool. The results showed that all the main axes of the questionnaire achieved a Cronbach alpha coefficient above 0.7, which is the scientifically accepted limit, indicating a high level of stability and internal consistency in the participants' answers**.**

Table (3) Cronbach alpha coefficients

Cronbach's alpha coefficients	Number of paragraphs	Variables
0.81	4	.Awareness and knowledge of the green economy
0.84	4	Economic and environmental drivers of the transition to a .green economy
0.80	4	Challenges and barriers to the implementation of the green .economy
0.79	4	The Role of Government Policy and Institutional Support
0.81	4	The readiness of individuals and institutions to transition to a green economy
0.85	20	Total

Source: Prepared by the researcher from the results of the field study 2025

4.5: Methods of statistical analysis used in the study:
The Statistical Package for the Social Sciences (SPSS-27) was used to do it. Descriptive figures were used to show what the group was like and how the people who filled out the survey answered the questions. Some of these were rates, percentages, numeric means, and standard deviations. It was also used to check that all the results were the same and to see how stable and correct the measures of resolution were. Number-based tools were used to carry out the study. To talk about the terms in the study group in this case, the mean and the standard deviation can be used. ANOVA was used to see if there were statistically significant differences in changes between more than two groups. The

Independent Samples T-Test was used to see if there were statistically significant differences between two sets of different data.

4.6: Presentation and analysis of study data

The study's goal is to find "descriptive" facts that show how much the units that were looked at affected the study factors. First, an estimate will be made of the mean and standard deviation. After that, the words will be put in order of how important they were:

- **The first axis: awareness and knowledge of the green economy**

Table (4) Descriptive Statistical Analysis of the Statements of the Impact of Artificial Intelligence on Economic Sectors

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
3	Medium	1.09	3.40	I have a good knowledge of the concept of green economy.	1
1	High	.780	4.03	I believe that the green economy contributes to achieving sustainable development.	2
2	High	.790	3.88	A green economy can be an effective alternative to the traditional economic model.	3
4	Medium	1.06	3.23	I follow the news and updates about the green economy.	4
	High	0.92	3.63	Total phrases	

Source: Prepared by the researcher from the results of the study data for the field 2025

The study sample's average results on a measure of how much they know about and care about the green economy are between 4.03 and 3.23, as shown in Table (4). There is a standard deviation of 0.92, and the mean of all the reports is 3.63. This shows that a lot of people knew about the green economy. The table also shows how different the group's members' scores were. There is a range of scores from 1.09 to 0.07. Most of the people who answered agree on what the words mean when it comes to how much they know about the green economy. The most important sentence was "I believe that the green economy helps achieve sustainable development," which got a score of 4.03. The least well-scored phrase was "I keep up with news and changes in the green economy."

- **Second Theme: Economic and Environmental Motives for the Transition to a Green Economy**

Table (5) Descriptive statistical analysis of the statements of the economic and environmental motives axis for the transition to a green economy

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
2	Very high	0.70	4.25	Green economy helps reduce environmental pollution.	1
4	High	0.77	4.07	The shift towards a green economy creates new job opportunities.	2
3	Very high	0.67	4.23	Relying on renewable energy reduces long-term costs.	3
1	Very high	0.71	4.41	Sustainable agriculture helps achieve food security.	4

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
	Very high	0.71	4.23	Total Ferries	

Source: Prepared by the researcher from the results of the study data for the field 2025

Table 5 shows that most of the people in the study group think that we should switch to a green economy because it is better for the earth and the business. The answers have a mean of 4.23 and a standard deviation of 0.71. The norms of the answers are between 4.41 and 4.07. Thanks for your answer. This means that most of the people in the study group agree with these reasons. The low standard deviation (between 0.67 and 0.77), which shows that most of the people in the study group agree, is another sign of how much they agree. A mean score of 4.41 showed that the line "sustainable agriculture helps achieve food security" was the most important. "The move to a green economy creates new jobs" gets the lowest score of 4.07.

- **Third Theme: Challenges and Obstacles to the Implementation of the Green Economy**

Table (6) Descriptive statistical analysis of the phrases of the axis of challenges and obstacles to the application of the green economy

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
1	Very high	0.64	4.43	The green economy rationalizes natural resources and reduces their waste, ensuring their .sustainability for future generations	1
3	High	1.03	3.86	High upfront costs are an obstacle to the :implementation of the green economy	2
4	High	0.73	3.69	There is a lack of legislation and policies that .support the green economy	3
2	High	0.79	4.13	Lack of societal awareness hinders the adoption of .the practice of green economy	4
	High	0.79	4.03	Total phrases	

Source: Prepared by the researcher from the results of the study data for the field 2025

It is clear from Table (6) that the average responses of the study sample on the axis of challenges and obstacles to the application of the green economy range between (4.43, 3.69) and a general average of all statements of (4.03) and a high level of response, which indicates that the members of the study sample agree on the challenges and obstacles to the application of the green economy and the table also shows the relatively low standard deviation (ranging between 0.64 1.03), which indicates that most of the study sample members agree on the existence of challenges and obstacles to Application of green economy. Descriptive analysis shows that the phrase "green economy works to rationalize natural resources and reduce their waste, ensuring their sustainability for future generations" ranked first in terms of relative importance with an arithmetic average of (4.43). While in last place is the statement (there is a lack of legislation and policies that support the green economy) with an arithmetic average of (3.69).

- **Fourth Theme: The Role of Government Policies and Institutional Support**

Table (7) Descriptive statistical analysis of the phrases of the role of government policies and institutional support

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
1	High	0.71	3.81	Companies are afraid to switch to a green economy because of its impact on short-term .profits	1
3	High	0.88	3.68	The government offers financial incentives to .companies that adopt green economy practices	2
4	High	0.85	3.51	There is sufficient investment in research and development in the field of green economy.	3
2	High	0.84	3.77	Current laws promote investment in renewable .energy	4
	High	0.82	3.69	Total phrases	

Source: Prepared by the researcher from the results of the study data for the field 2025

It is clear from Table (7) that the average responses of the study sample on the axis of the role of government policies and institutional support range between (3.81, 3.51) with a general average of all statements of (3.69) and a standard deviation of (0.82) and a high level of response, which indicates that the members of the study sample agree to a high degree on the role of government policies and institutional support, and the table also shows the relatively low standard deviation (ranging between 0.88, 0.71), indicating that most respondents largely agree on the role of government policies and institutional support around the green economy. Descriptive analysis shows that the phrase "companies are afraid to switch to a green economy because of its impact on short-term profits" ranked first in terms of relative importance with an arithmetic average (3.81). While in last place is the statement (there is sufficient investment in research and development in the field of green economy) with an arithmetic average of (3.51).

- **Fifth Theme: The readiness of individuals and institutions to transition to a green economy**

Table (8) Descriptive statistical analysis of the statements of the readiness of individuals and institutions to transition to a green economy

Order	Degree of response	Standard deviation	Arithmetic mean	Ferry	M
2	Very high	.680	4.45	More awareness is needed on the importance .of the green economy	1
4	Medium	1.02	3.49	I am ready to pay extra for environmentally .friendly products	2
3	High	.930	3.94	I practice environmentally friendly behaviors such as recycling and reducing energy .consumption	3
1	Very high	.710	4.49	I support strict laws on companies that cause .environmental harm	4
	High	0.83	4.09	Total phrases	

Source: Prepared by the researcher from the results of the study data for the field 2025

When the study group members were asked if people and businesses are ready to switch to a green economy, the average answer was between 4.45 and 3.49. All comments got a mean score of 4.09, which means there was a lot of talk. Most of the people in the study group believe that people and businesses are ready to switch to a green economy. It is also low, with a range of 0.68 to 1.02, as shown in the table. These answers show that most of the people asked about how ready companies

and people are to switch to a green economy were pretty much the same. "I support strict laws on companies that damage the environment" got the highest score of 4.45 and was the best answer. "I'm willing to pay more for environmentally friendly products" got the lowest score on all of the tests.

4.7: DISCUSSION OF STUDY ASSIGNMENTS:

- **Main study hypothesis: There are statistically significant differences in individuals' awareness of the green economy according to their demographic variables (gender, age, educational level, job status, sector, and place of residence).**

The following sub-hypotheses are sub-subsisted:
1 / There is a statistically significant difference in individuals' awareness of the green economy according to gender (male / female).
2 / There is a statistically significant difference in individuals' awareness of the green economy according to the place of residence (city / countryside).
3 / There is a statistically significant difference in individuals' awareness of the green economy according to the sector (governmental / private).
4/ There is a statistically significant difference in individuals' awareness of the green economy according to the age group.
5 / There is a statistically significant difference in individuals' awareness of the green economy according to the educational level.
6/ There is a statistically significant difference in individuals' awareness of the green economy according to job status.
The following are the results of the sub-hypothesis test

- **There is a statistically significant difference in individuals' awareness of the green economy according to gender (male/female)**

The T test was used to see if there were statistically significant differences in how aware people were of the green economy based on gender (male vs. female) for different groups of people. The study used a level of significance of 0.05, which means that the differences are statistically important if the test's significance level (Sig.) is less than the level of significance. If the other way around is true, then it's also true. The table below shows that.

Table (9) Results of T Test for Independent Samples on Individuals' Awareness of the Green Economy

Interpretation	itself	T value	Standard deviation	Average	genre
D	0.011	2.928	1.113	3.33	male
			0.534	4.00	female

Source: Prepared by the researcher from the results of the field study 2025

The results of the t-test for the independent samples showed that there were statistically significant differences in the level of awareness of the study sample members of the green economy according to the gender (male / female), where the value of (t = 2.928 with a level of significance ((sig = 0.011), which is a value lower than the level of significance (0.05) adopted in the study, and the results also

indicate that females recorded a higher average awareness (4.00) compared to males (3.33), which may reflect a greater interest among females in the concepts of sustainability and economy and these The results indicate that females are more aware of the concepts of green economy compared to males and this can be explained Females in the sample may be more exposed to content related to the environment and sustainability through school curricula, community volunteer activities, or media programs. The difference may also reflect the high sensitivity of females to environmental issues and interest in the concepts of sustainable development and climate change, which is supported by some previous literature indicating a high participation of women in Environmental campaigns and community initiatives related to environmental awareness, and it is also possible that some sectors or institutions to which females belong provide greater opportunities for education about the concepts of green economy.

The idea from the first sub-study that there is a big difference between what men and women know about the green economy is true.

- **There is a statistically significant difference in individuals' awareness of the green economy according to the place of residence (city / countryside).**

The T test was used on two different groups of people to see if there were statistically significant differences in how aware people were of the green economy based on where they lived (city vs. country). The study used a level of significance of 0.05, which means that the differences are statistically important if the test's significance level (Sig.) is less than the level of significance. If the other way around is true, then it's also true. The table below shows that.

Table (9) T test results for independent samples on the extent of individuals' awareness of the green economy according to the place of residence (city / countryside).

Interpretation	itself	T value	Standard deviation	Average	Accommodation
D	0.008	3.022	1.067	3.67	City
			1.154	3.01	countryside

Source: Prepared by the researcher from the results of the field study 2025

The study group lived in different places, such as cities and farms. The t test for separate samples showed that the amount of knowledge about the green economy was statistically different for each group. At the level of significance (sig = 0.008), the value of t was 3.022, which was less than the 0.05 level of significance used in the study. People who lived in cities were generally 3.67 times more aware than people who lived in rural places, who were generally 3.01. People who live in cities know more about the "green economy" than people who live in the country. Most likely, this is the case. This is because there are more places to learn about the environment and more services and programs for the environment in towns. The second sub-study's main idea is right: people's level of knowledge about the green economy is statistically different depending on whether they live in a city or the country.

- **There are statistically significant differences in the level of awareness of individuals about the green economy according to the type of sector (governmental / private).**

And to find out if the difference in how much people know about the green economy based on whether they work for the government or a business is statistically significant. The study looked at two groups of people, and the level of significance was set at 0.05, which is the same as ±. There are statistically important changes when the Sig. value of the test is less than the significance level. It's

also true when the difference is bigger than the importance level number. The table below shows that.

Table (10) T test results for independent samples on the extent of individuals' awareness of the green economy according to the type of sector (government / private).

Interpretation	itself	T value	Standard deviation	Average	Accommodation
D	0.006	3.786	0.7435	4.03	City
			0.8985	3.45	countryside

Source: Prepared by the researcher from the results of the field study 2025

The results of the t test for independent samples showed statistically significant differences in the level of awareness of the study sample members of the green economy according to the type of sector (governmental / private). The study also reached the average awareness value for the government sector (4.03) while the average awareness value for the private sector was (3.45), and these results indicate that government sector employees have a higher awareness of the green economy compared to their counterparts in the private sector. This may be due to the intensity of government programs and policies aimed at promoting green economy practices within government institutions, or because environmental policies are applied more stringently in government agencies than in the private sector. In addition to workers in the government sector , they are more involved in training programs or official workshops organized by the state or public institutions to promote the concepts of sustainable development, on the other hand, some workers in the private sector may suffer from training opportunities or low official awareness of green economy issues compared to the government sector.
Accordingly, No matter what kind of business someone works in (private or public), they seem to know more or less about the green economy. It backs up the idea from the third sub-study.

- **There is a statistically significant difference in individuals' awareness of the green economy according to age group.**

We used the ANOVA test to see if there were significant differences in how much people know about the green economy based on their age. An important level (0.05 = ±) was used in the work. If the test's level of significance (Sig.) is less than the level of significance, the difference is statistically significant. It works the other way too. The table below shows that.

Table (11) F test results according to the differences between respondents' answers about individuals' awareness of the green economy according to
For the age group

Itself.	F test	Average squares	Degrees of freedom	Sum of squares	source
0.115	2.034	2.232	3	6.696	Between groups
		1.097	88	96.554	Inside groups
			91	103.250	Total

Source: Prepared by the researcher from the results of the field study 2025

The results of ANOVA indicated that there were no statistically significant differences in the level of awareness of individuals in the green economy between different age groups at the level of significance (0.05), where the calculated value of F was (2.232) and the probability value (sig=

(0.115), which is greater than (0.05), which means accepting the null hypothesis, which means that there are no significant differences in individuals' awareness of the green economy due to the different categories.Age. This result means that awareness of the green economy is close among all age groups, and no age group has a higher or lower awareness significantly, this may indicate that awareness efforts on the concepts of green economy have reached all groups in a balanced manner, whether through the media, government initiatives or formal education. Awareness of the green economy is likely to be related to other factors, such as educational level or sector type. Functional, more than age-related.
Accordingly, the hypothesis of the fourth sub-study, which stated (there is a statistically significant difference in individuals' awareness of the green economy according to age group), is rejected.

- **There is a statistically significant difference in individuals' awareness of the green economy according to educational level.**

We used the analysis of variance (ANOVA) test to see if the amount of training made a big difference in how much people knew about the green economy. The study used a level of significance of 0.05. A difference is statistically important if the significance level (Sig.) of the test is less than the significance level, or if it's the other way around. The table below shows that.

Table (12) F test results according to the differences between respondents' answers about individuals' awareness of the green economy according to
For educational level

Itself.	F test	Average squares	Degrees of freedom	Sum of squares	source
0.022	3.357	3.644	3	10.932	Between groups
		1.086	88	95.535	Inside groups
			91	106.467	Total

Source: Prepared by the researcher from the results of the field study 2025

The results of ANOVA indicated that there were statistically significant differences in the level of awareness of individuals in the green economy depending on the educational level at the level of significance (0.05), where the calculated F value was (3.357) and the p-value (sig=(0.022), which is less than (0.05), which means rejecting the null hypothesis and accepting the existence of significant differences between the different educational levels (intermediate diploma, bachelor's degree)., Master, PhD).
To determine the source of these differences, the Tukey HSD test was applied for dimensional comparisons between the four educational levels. The results showed the following:

Table (13) Tukey Test for Dimensional Comparisons

Significance	Critical value	Average difference	Comparison		
Non D	0.093	0.6324	Diploma – Bachelor		
Non D	0.568	0.6444	Diploma – Master		
Non D	0.564	0.6421	Diploma – PhD		
D	0.045	1.276	Bachelor – Master		
D	0.017	1.6769	Bachelor - PhD		
D	0.023	1.8054	Master - PhD		

Source: Prepared by the researcher from the results of the field study 2025

The results of a test indicate that those with higher educational levels (bachelor's, master's, doctorate) have the highest levels of awareness of the green economy, followed by the university category, while individuals with a diploma or intermediate education were significantly less aware, and this can be explained by the fact that individuals with advanced academic degrees (master's, doctorate) are more exposed to specialized academic content that covers sustainable development and green economy issues.In undergraduate and graduate curricula, in addition to their continuous access to the latest environmental research and policies. These individuals may also have greater opportunities to participate in scientific conferences and seminars that highlight green economy issues. In On the other hand, less educated groups (such as diploma or intermediate education) may be less informed or exposed to these topics due to limited academic curricula or poor participation in sustainability-related events, which is reflected in their low level of awareness of these issues.
Accordingly, the hypothesis of the fifth sub-study is accepted, which stated (there is a statistically significant difference in individuals' awareness of the green economy according to educational level).

- **There is a statistically significant difference in individuals' awareness of the green economy according to job status.**

Based on that center, we used the analysis of variance test (ANOVA) to see if there were big changes in how much people knew about the green economy. An important level (0.05 = ±) was used in the work. If the test's level of significance (Sig.) is less than the level of significance, the difference is statistically significant. It works the other way too. The table below shows that.

Table (14) F test results according to the differences between respondents' answers about individuals' awareness of the green economy according to Career Center

Itself.	F test	Average squares	Degrees of freedom	Sum of squares	source
0.047	2.257	2.536	3	7.607	Between groups
		1.123	88	98.861	Inside groups
			91	106.467	Total

Source: Prepared by the researcher from the results of the field study 2025

The results of ANOVA indicated that there are statistically significant differences in the level of awareness of individuals in the green economy according to the job position at the level of significance (0.05), where the calculated value of F was (2.257) and the probability value (sig=(0.047), which is less than (0.05), which means rejecting the null hypothesis and accepting the existence of significant differences between the different job centers (boss, employee, self-employment, other).
To determine the source of these differences, the Tukey HSD test was applied for dimensional comparisons between the four functional centers. The results showed the following:

Table (15) Tukey Test for Dimensional Comparisons

Significance	Critical value	Average difference	Comparison
Non D	0.653	0.432	Head - Freelancer
D	0.011	1.228	Head - Officer
Non D	0.428	0.970	Head - Others
Non D	0.392	0.503	Employee - Self-Employment
Non D	0.652	0.439	Freelancing - others

Source: Prepared by the researcher from the results of the field study 2025

The results indicate that individuals in leadership positions (head-employee) have the highest level of awareness of the green economy, which reflects that the job position has an important role in the level of individual awareness of the concepts and practices of the green economy, as the results indicate that individuals who occupy key or administrative positions have a higher level of awareness about the green economy compared to freelancers or classified among others, and this can be explained by several factors:

Individuals in leadership or management positions are usually more engaged with internal and external policies related to sustainable development and environmental responsibility in their organizations.

Presidents or administrators get more opportunities to attend workshops or courses on topics such as green economy and sustainability, which enhances their awareness.

Self-employed people may often focus on the day-to-day operational aspects of their business, which may reduce their interest or knowledge of the environmental principles associated with the green economy.

Other categories may include students or individuals outside the formal labor market , which explains their lower level of awareness compared to regular bosses or employees.

Accordingly, the hypothesis of the fifth sub-study is accepted, which stated (there is a statistically significant difference in individuals' awareness of the green economy according to educational level).

5: CONCLUSIONS AND RECOMMENDATIONS:

5.1: Results:

1/ The results of the analysis showed that there were statistically significant differences between males and females in the level of awareness of the green economy , the average awareness among females was higher than males.

2/ There are statistically significant differences between workers in the government sector and the private sector, where the results of the estimate showed that workers in the government sector recorded a higher level of awareness compared to workers in the private sector.

3/ There are statistically significant differences between the city population and the rural population , as the study found that the city population showed a higher level of awareness compared to the rural population.

4/ There were no statistically significant differences between different age groups , as all age groups showed similar levels of awareness .

5/ Statistically significant differences appeared between the different levels of education, as the post-comparison tests showed that those who obtained a bachelor's, master's degree, and doctorate showed levels of awareness of diploma categories or less.

6/ Statistically significant differences appeared between the different duty stations, individuals in senior management positions showed the highest level of awareness compared to the rest of the categories.

7/ The study sample members largely agree on the economic and environmental motives for the transition to a green economy.

8/ The study sample members agree with a high level of response to the challenges and obstacles to the implementation of the green economy.

9/ Members of the study sample agree to a high degree on the role of government policies and institutional support.

5.2: Recommendations:

1/ Preparing awareness campaigns targeting males in particular to enhance their awareness of the concepts and practices of the green economy.
2/ Promoting awareness of the concepts of green economy at various educational levels, with a greater focus on the category of "diploma or less".
3/ Benefiting from holders of higher degrees (Master and PhD) in leading environmental initiatives and green economy programs within institutions.
4/ Strengthening awareness programs in the private sector and raising the efficiency of its workers in the field of sustainable development and green economy.
5/ Designing programs directed to groups that occupy non-leadership positions (employees and self-employed) to expand the circle of beneficiaries of green economy concepts.
6/ Develop initiatives for rural residents to ensure that green economy concepts and practices reach them as effectively as urban areas.
7/ Continuing to support all age groups without discrimination, with the possibility of focusing on holistic strategies by virtue of the absence of significant age differences.
8/ Enhancing the role of the media, especially digital platforms, in spreading the concepts of green economy to reach various segments, especially in areas where awareness rates are low.
9/ Encouraging cooperation between government agencies and academic institutions to develop applied research and specialized awareness campaigns according to the results of this type of studies.

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