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"The role of green taxes in promoting sustainable development: An applied study in the General Tax Authority of Iraq"

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Abstract : The purpose of the study is to determine how Iraq's development sustainability will be affected by the implementation of green taxes. To accomplish the goals of the study and confirm the accuracy of its hypotheses, the descriptive analytical technique was combined with an inductive-deductive approach. The research's applied component was based on the perspectives of a sample of General Tax Authority workers, a questionnaire was prepared that included a set of questions related to the research variables and was distributed to the research sample of employees working in the General Tax Authority, numbering 30 individuals. Using statistical analysis according to the statistical program (SPSS), the results showed a strong direct relationship between the independent variable (green taxes) and the dependent variable (sustainable development), in addition to the existence of a significant effect of the independent variable green taxes on the dependent variable sustainable development, The study came to a number of results, the most important of which was that imposing green taxes on those who cause environmental pollutants contributes to giving a monetary value to the exploitation and sustainability of ecological resources, which are often exploited for free due to polluters dumping their polluted waste in various elements of nature without compensation. The research also confirmed that using green taxes as an effective economic tool to reduce environmental pollution and direct the behaviour of Consumers towards a green economic environmental culture and investing its revenues in development projects in the fields of environmentally friendly renewable energies can bring about changes in environmental sustainability and help develop the economies of countries by directing the resources of these taxes to protect natural resources, which is positively reflected on the environment and helps in sustaining its development.

Keywords: Green taxes, environmental pollutants, sustainable development, Iraqi General Tax Authority.

INTRODUCTION: As a result of the economic and environmental disasters that have swept many countries of the world, including global warming, environmental degradation, loss of biodiversity, and the expansion of desertification, in addition to increasing population growth rates, there has been a growing international interest in sustainable development to reach a safe and sustainable future. Therefore, all countries have sought to adopt real and serious steps to true sustainability to reconcile development and the environment, through which sustainable development efforts and environmental conservation can be integrated beneficially for the public good.

Today's prevailing sustainable development is based more on environmental reform. Green reforms have been successful in bringing environmental issues to the political agenda in a short period of time through sustainable development, which has led to the creation of the majority of modern environmental regulations. The prevailing belief that economic development and the requirements of ecological and social sustainability must be balanced is reflected in these programs.

Economic activity must consider the ensuing interrelated environmental, economic, and social implications for present and future generations in order to promote sustainable development. Since they efficiently encourage the development and adoption of clean technology to lessen adverse environmental effects, green taxes are becoming increasingly recognised as a useful instrument in sustainability economics. In order to employ environmental indicators to accomplish sustainable development goals, incentive-based strategies must be used to make sure that. There has also

been increased interest in green tax reform, which involves increasing taxes on environmental use and reducing taxes on other tax bases.

1. The Methodology of Research

2.1 The research problem

The research problem can be formulated by raising the following questions:

1. How can tax reform eliminate or reduce negative environmental impacts by imposing green taxes?
2. Can sustainable development be achieved by imposing green taxes on environmental pollutants in Iraq?
3. Does imposing green taxes contribute to preserving natural resources, combating environmental pollution, and achieving ecological sustainability?
4. How can green investments be included in economic stimulus packages in Iraq?

2.2 The importance of the research

The research is important because it clarifies the extent to which environmental levies can be levied in accordance with to the polluter pays principle to achieve environmental sustainability and enhance economic development paths in Iraq, as green taxes play an important role in reducing pollution and preserving the environment in addition to their social goals by imposing a high tax on goods and materials that are harmful to human health, in addition to the importance of activating environmental taxes in Iraq on environmental pollution of factories to achieve sustainable development.

2.3 Research objectives

The research seeks to achieve some objectives, including:

1. Shedding light on the nature of green taxes and sustainable development.
2. Clarifying the justifications for imposing green taxes, their advantages and disadvantages.
3. Identifying the criteria and indicators of environmental pollution.
4. Examining and quantifying how green fees affect Iraq's sustainable development.

2.4Research hypotheses

The main hypothesis of the research is based on the existence of a statistically significant correlation between green taxes and sustainable development, and that imposing taxes on polluters contributes to sustainable development in Iraq.

2.5 Research approach

The inductive-deductive approach was used in addition to the descriptive-analytical approach in addressing the research problem, achieving its objectives, and proving its hypotheses.

2.6 Research Limits

Spatial Limits: General Tax Authority in Iraq.

Time Limits: The period from 10-1-2023 to 2-1-2024 (the period of preparing the questionnaire, distributing it to respondents, and obtaining answers).

2.7 Research Community and Sample

Community: General Tax Authority in Iraq.

Sample: Intentional, consisting of many individuals working in the General Tax Authority from the accountants and appraisers category, as they are more familiar with the amount of tax revenues collected from various sources.

2.8 Research Structure

Three sections plus an introduction comprised the research. We covered the study's theoretical underpinnings in the first portion, its practical application in the second, and its conclusions and suggestions in the third.

2. Theoretical Framework for Green Taxes and Sustainable Development

3.1 Definition of Green Taxes

Green taxes, which the European Space Agency designated as a tax, are described by the Statistical Office of the European Union as "taxes whose tax base is a material unit for something that has a specific and proven negative impact on the environment." (Eurostat, European Union, P.Q, 2013).

Another way to describe it is as "those taxes imposed on polluters who cause environmental damage through their economic activities resulting from their products polluting or using technologies that are harmful to the environment; the degree of danger of emissions polluting the environment is estimated to determine the percentage of these taxes." (Al-Hajj, 2019: 217).

The Organisation for Economic Co-operation and Development (OECD) defined it as (mandatory expenses without compensation collected on behalf of the public treasury and imposed due to the association of its container with the environment) (Murad, 2022: 170).

Many legislations have included texts that force the economic unit or investor to bear this cost with the provision of some Tax and non-tax incentives that represent contributions by the government towards the cost of pollution control.

3.2 Objectives of imposing green taxes

Using the polluter pays principle to integrate economic and environmental policies in order to combat pollution and preserve the environment, the green tax addresses market failure with regard to external effects and is an effective way to integrate the costs of services and environmental damage directly into the prices of goods and services or into the costs of activities that cause pollution. It also encourages producers and consumers to change their behaviour towards using resources in a way that supports environmental preservation. - and an effective means aimed at combating sources of pollution in addition to increasing revenues used to cover environmental expenses and raising their level, and this is only translated by adding environmental objectives to the social, economic and financial objectives of taxes, which leads to changing behavior and saving a lot for nature, the state treasury and the economy, in addition to a group of other objectives, including: (Harak, 2014: 97)

1. Contributing to pollution elimination.
2. Achieving rapid development based on a clean environment.
3. Providing new financial resources to achieve environmental sustainability.
4. Applying the principle of (polluter pays).
5. Directing consumer behaviour towards products and materials whose production does not cause environmental pollution.
6. Modifying producer behaviour towards environmentally friendly activities.
7. Increasing tax revenues.
8. Increasing environmental spending by using environmental tax resources to reduce pollution and reduce its effects.
9. Reducing taxes on other types, such as capital and savings.
10. Encouraging the innovation of pollution-free products.

3.3 Reasons for imposing green taxes

The difficulties and adverse effects on the environment put more pressure on governments to figure out how to lessen the harm to economic expansion, and resulting from many factors, including gases emitted from vehicles, oil refineries, sewage and waste problems, and burning biomass (burning plant materials or coal for heating and cooking), Iraq ranked first in the Arab world and thirteenth globally as the most polluted country according to air pollution indicators for the year 2023, as the air pollution level in it recorded a rate of 2.5 pm in real time and an average of 86.7, exceeding more than 10 times the guidelines of the World Health Organization (bayancenter.org) and here , governments must use a range of tools, includin Regulations, communication campaigns, innovation policies, subsidies, environmental incentives, and environmental levies are some of the instruments that governments must employ in this situation. An essential tool for raising tax revenues and addressing a variety of environmental problems, such as waste management, contamination of the air, water, and soil, and the control of harmful emissions, is environmental taxes. (www.oecd.org).

Without government intervention, there is no incentive or deterrent for economic units or citizens to consider the environmental damage resulting from their economic activities. Therefore, protecting the environment in general requires collective action through measures taken by the government, including the use of environmental taxes for several reasons, including: (BouJomaa, 2016: 30-39)

1. Applying the polluter pays concept by directly factoring the costs of environmental harm into the expenses of the products, services, and actions that caused it.
2. Encouraging producers and consumers to avoid behaviours and activities that are harmful to the environment and encouraging environmental goods (non-polluting to the environment), in the case of tax exemptions or subsidies in general.
3. Motivating producers to innovate when energy, water, air, raw materials and waste are subject to tax.
4. Boosting income that can be utilised to make environmental improvements, providing subsidies and incentives to others to do the same, or shrinking the scale of certain other, more expensive enterprises.
5. Reliably changing behaviour because integrating environmental costs into product prices will increase the prices of polluting products and thus reduce demand for these products, which reduces the negative effects on the environment (Green Fiscal Commission, 2009: 1).

3.4 Green Tax Principles

The OECD has issued several good environmental regulations that include the following principles: (www.iberdrola.com) (Harrak, 2014: 111)

1. Environmental levies ought to focus on the actions of the polluter.
2. The extent of the harm should be covered by the environmental tax.
3. The tax rate ought to be commensurate with the extent of the harm done to the environment.

4. The tax should be believable and its rate should be predictable enough to promote environmentally friendly behaviour.
5- Use the proceeds of environmental tax reform as additional revenues or contribute to reducing other types of taxes.
6- Raise awareness and communicate with the public to reduce environmental taxes.
7- It should be characterized by comprehensiveness and tax coordination between different countries because, in the absence of environmental tax homogeneity, it will lead to harm to international competition.
8- The use of incentives is effective in motivating institutions to acquire low-pollution technology and equipment.
9- Environmental taxes must be imposed at low prices to encourage individuals to activate them, especially in light of the low environmental tax awareness in societies.

3.5 Types of environmental taxes

1. Waste or emissions tax: This kind of tax is levied on a range of economic units' productive activities. Because it represents the value of the adverse external impacts brought on by conducting operations that pollute the environment, it also serves as a market price for the external cost of pollution.
2. Carbon Tax: One of the earliest forms of taxation, the carbon tax was established solely for financial purposes and is levied on a variety of fuels, including coal, liquefied gas, natural gas, diesel, kerosene, petroleum, and petroleum fuel.
3. Transportation Taxes: This category of tax include the fossil fuels' kilometres tax as well as the sales tax on automobile engines. (Al-Rubaie and Shiaa, 2011: 28)
4. Pollution taxes: These include levies on noise, solid waste management, water, and air pollutants that are measured or assumed.
5. Resource taxes: These comprise levies associated with the exploitation and depletion of natural resources, including forests, water, plants, and wildlife. (European Union, 2013:14).

Some important matters must also be taken into consideration when planning to impose green taxes (Abboud, 2016 103):

1. Diagnosing the environmental goal.
2. Diagnosing the behaviour that needs to be changed and corrected.
3. Identifying the people whose environmental behaviour needs to be corrected.
4. Determining a correct tax system.
5. Legislating an environmental tax law.
6. Determining the financial aspects.

3.6 Standards and indicators for measuring environmental pollution

To determine the effects of pollution and the extent of its danger, tools must be available to determine the degree of pollution of the elements that make up the ecosystem as a whole, and to support decision-makers in proper planning to determine priorities in exploiting the available capabilities and resources to achieve the desired goals, which accurately reflect the environmental situation, within the framework of implementing political directives on the necessity of taking all measures to preserve the environment to provide a safe life and good health for humans, which can be divided into two elements:

1. Environmental pollution measurement standards: They are used to determine the rates of environmental pollution as a monitoring tool to ensure that certain and appropriate rates of environmental pollution are set. This will only be achieved by finding objective standards to measure the degree of pollution, to reduce it permanently or temporarily, to protect the environment. These standards can be summarized as follows:

- Before being compared to the amount permitted by science, a sample from the medium exposed to pollutants (such as air and water) is taken, examined, and the pollution level assessed. The environmental medium standard is what this is called.
- Emission standard for pollutants: This is to determine the amount of pollutants that factories and cars emit over a specific time period and compare it to the permitted amount..
- Availability standard for operating conditions: This refers to assessing the accessibility of methods for treating the resulting pollution, such as the requirement to install certain equipment in certain factories to lower emissions of pollutants.
- Standard of manufactured goods: This refers to quantifying the contaminants present in specific products using the chemical and physical properties of their components (such as dyes and preservatives) and determining the maximum permissible limit for health.

2. Environmental indicators: Environmental indicators are one of the most important tools used to identify the reality of each environmental phenomenon, which is what makes the bodies responsible for protecting the environment use these indicators to measure the degree of pollution, and there are many of them, including, for example:

- Per capita share of agricultural land: This indicator includes measuring the per capita share of arable farm land as well as the per capita share of land available for agricultural production. Agriculture plays a major role in achieving sustainable development because it provides food for the population in addition to job opportunities. This makes it the engine of economic growth, especially since it can contribute to alleviating poverty and unemployment.
- Change in forest and woodland areas: This indicator shows the percentage of change in the area of green land to the total area of the country. If the rate of this indicator is high, it indicates the possibility of increasing agricultural production. The opposite suggests the expansion of desertification and its encroachment on green lands.
- Desertification: Measuring the lands affected by desertification and their percentage of the total area of the country, as desertification is one of the environmental problems facing most countries in the world. (BouJomaa, 2016: 21)

3.7 The role of green taxes in environmental rehabilitation

Green taxes have an important role in environmental rehabilitation, which is represented in two main methods: (Al-Hajj, 2919: 223)

- The incentive method:

It is a set of incentives and exemptions that the establishment benefits from if it is committed to preserving the environment because burdening this establishment with taxes and fees harms the tax, as it may be faced with fraud and tax evasion, while incentive measures lead to a voluntary and automatic response by adopting environmentally friendly technology, which is either tax exemptions or environmental incentives such as grants and subsidies.

- The deterrent method:

The tax system as a whole, which includes environmental taxes and environmental fees, is characterised as a particular and chosen collection of technical tax images that are in line with the social, political, and economic realities of society. It is an integrated tax structure that serves to accomplish the objectives of environmental policy.

The second axis: Sustainable Growth

Since sustainable development has emerged as a global school of thought that is gaining traction in the majority of industrialised and developing nations alike, as well as being embraced by official and popular bodies that are calling for its implementation, the topic has drawn attention from all over the world on an economic, social, and developmental level. Although the idea of sustainable development has gained popularity quickly, it is still unclear.

First: Definition of sustainable development

The concept of sustainable development refers to development is that which achieves a balance between the interactions of the three environmental systems (the atmosphere, the social environment, and the industrial environment) and maintains the integrity of the ecological systems and their good performance. It is a set of policies adopted to move society to a better position using environmentally appropriate technology and to achieve a balance between building nature and destroying man. Therefore, multiple definitions of sustainable development have been formulated, including (it is the development that meets the needs of the present generation without compromising the ability of future generations to meet their needs) (Environmental and Global Committee, 1998: 16).

It was also defined as (a development that emphasizes using natural resources that are renewable without causing their extinction, deterioration, or decrease, such as soil and groundwater) (WCED, 1987: 8). Economists have used the concept of sustainability to express the required balance between growth and environmental conservation, in addition to achieving social justice, as sustainability is focused on three elements: the environment, the economy, and society, which cannot be separated from each other because the imbalance in one of them affects the basic goals of sustainability.

Therefore, the researcher believes that sustainable development provides the individual with experiences and knowledge. The necessary trends are to preserve natural resources, especially non-renewable ones, and to make good use of income and think positively about the future of coming generations.

Second: Characteristics of sustainable development: (Al-Rubaie, 2002: 55)

- It is more complicated and intricate than development in general, particularly regarding what is social and what is natural in development.
- Sustainable development aims to lessen the global poverty crisis by addressing the needs of the most impoverished social groups.
- The growth of spiritual and cultural elements while maintaining the civilizational uniqueness of civilisations is a qualitative characteristic of sustainable development.
- When quantitative and qualitative dimensions overlap, it allows for the separation of their components and the measurement of their indicators.
- The need for all wealthy nations to step in and help developing nations is a global aspect of sustainable development.

Third: Sustainable development indicators

These indicators reflect the extent of countries' success in achieving sustainable development. They primarily assess the status of countries through numerical standards that can be calculated and compared with other countries. It is also possible to follow up on changes and trends in the extent of progress or decline in the value of these indicators, which indicates countries' policies in the areas of sustainable development, whether they are moving in the correct direction or are still sluggish and apprehensive, as is the case with some nations worldwide.

The ability of indicators to represent the actual state of progress in the area of sustainable development makes them the most precise and thorough. The United Nations Commission on Sustainable Development created these, and they are commonly referred to as "pressure-state-response indicators." Economic, social, environmental, and institutional indicators are the four primary categories into which sustainable development indicators are often separated according to the definition of sustainable development. (Al-Kubaisi, 2005: 78). These indicators are:

- Economic indicators include:

- Per capita GDP.
- Per capita commercial energy consumption.
- Net official development assistance provided or received as a percentage of GDP.

- Poverty: This indicator is divided into two parts:

- Human poverty index.
- Population living below the poverty line.

- Environmental indicators.
- Institutional indicators.

Each of the above indicators has methods for measuring and comparing it with global indicators in this field.

Fourth: Dimensions of Sustainable Development: (Dimensions of Sustainability Development)

Only by successfully integrating and closely connecting the four fundamental components of development—economic, social, environmental, and technical—can sustainable development be accomplished. One of the most crucial elements of sustainable development is the integration of the social and environmental dimensions, as neglecting them has a detrimental impact on the technological and economic aspects.

1. The economic dimension

In addition to promoting the prudent and sensible use of economic resources, this component seeks to prevent the waste of both surface and internal financial resources and lessen income and wealth disparities. The evolution of production and consumption habits in industrialised nations has resulted from the fact that global statistics demonstrate that their citizens enjoy affluence, social welfare, and a higher degree of economic progress. Sustainable development also addresses equality between people and nations in terms of economic growth. On the other hand, developing countries are seeing a sharp fall in the quality of their natural resources and financial performance, which has a detrimental effect on the social aspects of their citizens through high unemployment rates and a decline in. (Murad, 2009: 108)

2. The social dimension

This component seeks to meet human needs, attain social justice and an appropriate income, and raise people's standard of living. It is founded on the distributive implications of policies and the justice principle. This dimension guarantees the security of their conventional production methods and social surroundings, and also has to do with health, education, housing, and employment. It seeks to uphold human rights, meet minimal security requirements, enhance access to essential health and educational services, and improve the interaction between humans and nature.. (Ghoneim and Abu Zant, 2007: 33)

3. The environmental dimension

The concept of flexibility, or the ecosystem's ability to adjust and maintain its ecological integrity, is the foundation of this dimension.. These systems are more susceptible to other dangers if they lose their adaptability. In order to ensure that each ecosystem has specific boundaries that cannot be exceeded in terms of consumption and depletion, environmental constraints must be taken into consideration. Nevertheless, the ecology deteriorates if these boundaries are crossed.

Accordingly, restrictions must be placed on consumption, population expansion, pollution, patterns of environmental production, soil degradation, deforestation, and water depletion. Additionally, environmental sustainability must be achieved, which is a development strategy that invariably results in the preservation of vital natural resources for human protection, including water, air, land, and biodiversity, to prevent their serious degradation through pollution, the buildup of carbon dioxide, the destruction of the ozone layer, and the destruction of natural habitats that support

them. This is accomplished by preventing pollution, conserving energy, and safeguarding non-renewable resources. (Al-Hiti, 2008: 23)

Summary: All nations, but particularly emerging nations, must use resources to improve living standards and combat poverty since sustainable development helps to lower energy and resource consumption. This is at the economic level; at the social and human level, health and education services, particularly in rural regions, need to be improved. The preservation of natural resources and the sensible and efficient use of agricultural areas, particularly water resources, are its main concerns at the environmental level. From a technological standpoint, it helps usher in a new era of clean industries that don't affect the environment and that use eco-friendly technology that emits the fewest amount of gases that trap heat and damage the ozone layer.

3. The Applied Aspect of the Study

4.1 Personal Characteristics of the Sample Individuals

This paragraph includes a presentation and analysis of the personal variables of the research sample.

Table (1): Distribution of the study sample according to social variables

Social variable	Categories	Number	Percentage %
Gender	Males	20	66.7
	Females	10	33.3
	Total	30	100
Age (years)	20 – 30	11	36.7
	31 – 40	9	30.0
	41 – 50	6	20.0
	51 and over	4	13.3
	Total	30	100
Educational attainment	Technical diploma	1	3.4
	Bachelor's degree	6	20.0
	Higher Diploma	-	-
	Master's degree	14	63.3
	PhD	4	13.3
	Total	30	100
Years of service	5 or less	15	50.0
	6 – 10	2	6.7
	11 – 15	3	10.0
	16 – 20	3	10.0
	20 and above	7	23.3
	Total	30	100
Job title	Accountant	9	30.0
	Estimator	7	23.3
	Auditor	6	24.9
	Manager	3	10.0
	Assistant	5	16.7
	Total	30	100
Specialization	Statistics	1	3.3
	Management	7	23.4
	Computers	2	6.6
	Finance and Accounting	16	53.4
	Economics	2	6.6
	Informatics	1	3.3
	Law	1	3.3
	Total	30	100

Source: Prepared by the researcher using SPSS-23.

From the data in Table (1), we note the following:

1. The percentage of males in the study sample reached (66.7%), which is greater than the percentage of females (33.3%).
2. The percentage of the ages of the respondents in the research sample (20-30) years was (36.7), which is higher than the rest of the other age groups, followed by the percentage of those aged (31-40) years at (30%), and the rest of the ages follow in succession.
3. Most of the sample members held a master's degree at (63.3%), followed by those with a bachelor's degree at (20%), and the rest of the individuals followed in succession.
4. It is clear from the experience categories of the study sample that most of them have (5 or fewer) years of experience, as their number reached (15) at (50%), followed by those with (20 years or more) at (23.3%), and the rest of the categories follow in succession.

5. Most of the sample members were in the position of accountant at (30%), followed by estimators at (23.3%), and the rest of the positions followed in succession.
6. Most of the individuals in the eye are in field of finance and accounting, at a rate of (53.3%), followed by administrators at a rate of (23.3%), and the rest of the specializations, respectively.

4.2 Tests of questionnaire data

1. Using Cronbach's alpha coefficient to test for validity and dependability

Cornbrash's alpha coefficient is one of the global reliability measures that is used to test the reliability of statistical tests and to evaluate the stability of the internal consistency of sample members' answers to questionnaire paragraphs, and the value of Cronbach's alpha is positive as it ranges from 0 to 1, and there is a consensus among the writers that the acceptable value is greater than or equal to (0.70), and through the results of the questionnaire, its validity and reliability in the green taxes and sustainable development variable were clarified.

Table (2): Cronbach's alpha coefficient for the reliability and validity of the scale of the questionnaire.

Variables	Cronbach's alpha value α	reliability coefficient=√α	Number of paragraphs
Green taxes	0.900	0.948	20
Sustainable development	0.950	0.974	20
Total	0.956	0.978	40

Source: Prepared by the researcher using the SPSS-23 program.

The results of Table (2) show that all the results of Cronbach's alpha values are acceptable values because they are greater than (0.70), and according to these high values, it is clear to us that the questionnaire is valid and scale-stable in its variables.

2. Normal distribution test

Numerous statistical tests are used in the normal distribution test, which determines how the data is distributed, the most important of which are the Kolmicrov-Smirnov test and the Shapiro test. When adopting this test, we obtained the results recorded in the following table.

Table (3): Normal distribution test for data

Variables	Test value of Kolmogorov Smirnov	Significance level (Sig.)	Shapiro-Wilk test value	Significance level (Sig.)
Green taxes	0.145	0.108	0.948	0.151
Sustainable development	0.111	0.200	0.943	0.110

Source: Prepared by the researcher using SPSS-23

Table (3)' results make it evident that the significance level (Sig.) for both tests and the variables under investigation is higher than 0.05, indicating that the data are regularly distributed..

3. Exploratory factor analysis

The number of paragraphs was decreased by the use of exploratory factor analysis. To ensure that the study sample was adequate for the analysis and that its value was greater than or equal to 0.50, the researcher used the Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity tests. The latter ensured that the relationship between the variables was statistically acceptable and that the critical value was less than 0.05.

Table 4: Findings from the green tax variable's exploratory factor analysis

Paragraphs	KMO	Critical Value (C.V)	Bartlett's Test Sig.	The suitability of the paragraphs of the study sample	Did the paragraph achieve Convergence validity?
Q1				0.794	Yes
Q2				0.815	Yes
Q3				0.870	Yes
Q4				0.890	Yes
Q5				0.830	Yes
Q6				0.860	Yes
Q7				0.867	Yes
Q8				0.764	Yes
Q9				0.770	Yes
Q10	0.745	480.99	0.000	0.834	Yes

Q11				0.744	Yes
Q12				0.760	Yes
Q13				0.842	Yes
Q14				0.673	Yes
Q15				0.717	Yes
Q16				0.797	Yes
Q17				0.756	Yes
Q18				0.786	Yes
Q19				0.842	Yes
Q20				0.933	Yes

Source: Prepared by the researcher using SPSS-23

Although the Bartlett's Test results for the independent variable's paragraphs were below the significant value of 0.05, it is evident from the above table that the KMO value for all dimensions of the independent variable (green taxes) is more than the value of 0.50. Conversely, the critical value denotes the degree of importance, and the research sample fit for every paragraph produced values over the conventional limit of 0.50. Therefore, the confirmatory factor analysis was used to acquire all values of the independent variable's dimensions.

Table 5: Findings from the sustainable development variable's exploratory factor analysis

Paragraphs	KMO	Critical Value (C.V)	Bartlett's Test Sig.	The suitability of the paragraphs of the study sample	Did the paragraph achieve Convergence validity?
Q1				0.877	Yes
Q2				0.742	Yes
Q3				0.617	Yes
Q4				0.663	Yes
Q5				0.834	Yes
Q6				0.772	Yes
Q7				0.650	Yes
Q8				0.750	Yes
Q9				0.894	Yes
Q10	0.754	564.935	0.000	0.807	Yes
Q11				0.728	Yes
Q12				0.764	Yes
Q13				0.854	Yes
Q14				0.794	Yes
Q15				0.726	Yes
Q16				0.765	Yes
Q17				0.771	Yes
Q18				0.711	Yes
Q19				0.758	Yes
Q20				0.938	Yes

Source: Prepared by the researcher using SPSS-23

The aforementioned table makes it evident that the KMO value for each of the dependent variable's dimensions (sustainable development) is more than 0.50. However, the Bartlett's Test values for the dependent variable's paragraphs were lower than the significant value of 0.05. This is due to the fact that the study sample fit for every paragraph obtained values above the conventional limit of 0.50, and the critical value indicates the degree of importance.4.3 Descriptive statistical analysis of the study variables

Below, statistical measures of mean, standard deviation, and coefficient of variation are used to present and evaluate the results of the sample members' responses on the research variables and their dimensions. The following categories of arithmetic means are displayed in Table (6):

Table (6): Categories of arithmetic means

Mean	1-1.80	1.81-2.60	2.61-3.40	3.41-4.20	4.21-5
Measurement	I do not completely agree	I do not agree	Somewhat I agree	I agree	I completely agree
Scale score	1	2	3	4	5
Level of interest	Very weak	Weak	Medium	High	Very high

Source: Likert, R. (1932), A technique for the Measurement of Attitudes, Archie's of psychology, New York: Columbia University Press.

The study sample's responses to the independent variable (green taxes) are analysed.

The study sample members' responses to the independent variable were descriptively analysed. (green taxes) and its dimensions are presented as Frequencies of sample individuals' answers in the appendices, and the following are the results:

Table (7) shows the results of the analysis of sample individuals' answers to the paragraphs of the independent variable, which are as follows:

Table (7): Analysis of sample individuals' answers to the green tax

S	Paragraphs	Paragraphs	Average	Standard Deviation	Coefficient of variation %
1	Q1	4.40	1.003	22.8	4.40
2	Q2	4.17	0.791	19.0	4.17
3	Q3	4.33	0.758	17.5	4.33
4	Q4	4.33	0.802	18.5	4.33
5	Q5	4.27	0.785	18.4	4.27
6	Q6	4.40	0.724	16.5	4.40
7	Q7	4.50	0.630	14.0	4.50
8	Q8	4.50	0.630	14.0	4.50
9	Q9	4.40	0.566	12.9	4.40
10	Q10	3.87	0.937	24.2	3.87
11	Q11	3.83	0.874	22.8	3.83
12	Q12	4.03	0.999	24.8	4.03
13	Q13	4.23	0.817	19.3	4.23
14	Q14	4.13	0.899	21.8	4.13
15	Q15	4.43	0.568	12.8	4.43
16	Q16	4.30	0.596	13.9	4.30
17	Q17	4.23	1.104	26.1	4.23
18	Q18	4.27	1.015	23.8	4.27
19	Q19	3.77	1.006	26.7	3.77
20	Q20	4.17	0.989	23.7	4.17
X1	Green Taxes	4.28	0.793	18.5	4.28

Source: Prepared by the researcher using SPSS-24

Table (7) indicates that the overall average value of the independent variable was (4.28), and the general agreement on the answers was at a high level, with a standard deviation of (0.793) and a coefficient of variation of (18.5%), as the lowest coefficient of variation (12.8%) was obtained in first place for the fifteenth paragraph, with an average value of (4.43) and a standard deviation of (0.568), which indicates that (the existence of international standards for measuring environmental pollution is one of the most important tools for environmental control), while the highest value of the coefficient of variation between the answers of the sample members of the study was (26.7%) for the nineteenth paragraph, as the average value was (3.77), and a standard deviation of (1.006), which indicates (the polluter pays principle contributes to achieving social justice).

2. Examining the responses of the research sample to the dependent variable (sustainable development)

The following responses from the study sample to the dependent variable (sustainable development) are included in the descriptive analysis:

Table 8: Examination of the sample's responses to the variable on sustainable development

S	Paragraphs	Paragraphs	Average	Standard Deviation	Coefficient of variation %
1	Q1	4.17	0.699	16.8	4.40
2	Q2	4.13	0.730	17.7	4.17
3	Q3	4.00	0.871	21.8	4.33
4	Q4	4.17	0.747	17.9	4.33
5	Q5	4.43	0.626	14.2	4.27
6	Q6	4.07	0.740	18.2	4.40
7	Q7	4.07	0.868	21.3	4.50
8	Q8	4.30	0.651	15.1	4.50
9	Q9	4.37	0.765	17.5	4.40
10	Q10	4.13	0.860	20.8	3.87
11	Q11	4.20	0.761	18.1	3.83
12	Q12	4.27	0.785	18.4	4.03
13	Q13	4.43	0.679	15.3	4.23

14	Q14	4.27	0.691	16.2	4.13
15	Q15	4.23	0.679	16.1	4.43
16	Q16	4.27	0.785	18.4	4.30
17	Q17	4.30	0.702	16.3	4.23
18	Q18	4.47	0.629	14.1	4.27
19	Q19	4.27	0.6 91	16.2	3.77
20	Q20	4.37	0.718	16.4	4.17
Y	Sustainable Development	4.25	0.734	17.3	4.28

Source: Prepared by the researcher based on SPSS-24

Table (8) indicates that the overall average value of the sustainable development variable was (4.25), and the general agreement on the answers was at a high level, with a standard deviation of (0.734) and a coefficient of variation of (17.3%), as the lowest coefficient of variation (14.1%) was obtained in first place for the eighteenth paragraph, with an average value of (4.47) and a standard deviation of (0.629), which indicates (the existence of explicit legal texts and deterrent procedures against polluters that limit environmental pollution and maintain the sustainability of the environment and natural resources), while the highest value of the coefficient of variation between the answers of the study sample members was (21.8%) for the third paragraph, as the average value was (4.00), and a standard deviation of (0.871), which indicates (the adoption of environmental sustainability in the strategic environmental assessment of plans and programs to obtain financial accreditation from the state's general budget).

4.4 Testing the hypotheses of the correlation and influence relationship of the study variables.

The main and sub-hypotheses related to knowing the correlation and influence relationship of the study variables are tested

1- Testing the hypotheses of the correlation relationship between the study variables

Using the correlation coefficient (r) value, ascertain the kind and degree Shows the relationship between the dependent variable (sustainable development) and the independent variable (green taxes). When two variables move in the same direction, there is a direct connection; when two variables move in the opposite direction, there is an inverse correlation. The correlation coefficient's value ranges between (±1) to indicate how strongly the independent and dependent variables are correlated.

The positive value close to (+1) represents the presence of a strong direct relationship, meaning that the degree of correlation is strong, while the negative value close to (-1) means the presence of a strong negative inverse relationship, meaning that the degree of correlation is strong. As for the value close to (zero), this means that there is no correlation between the two variables. There are two levels for accepting the correlation coefficient and accepting the hypothesis: the first level is at a confidence level of (95%) and the second level is at a confidence level of (0%).

Significant (0.05) and the second level at a confidence level of (99%) and a significance level of (0.01), but if it is greater than the 0.05 level or less than the 95% confidence level, the relationship is weak, meaning the hypothesis will be rejected due to the lack of a relationship between the two variables, and the rank correlation coefficient (Spearman's Rho) was used, which is a statistical indicator that aims to measure the correlation relationship (ranks) between two descriptive variables.

Table No. (9) shows the correlation relationship between green taxes and sustainable development as follows:

Table (9): Correlation coefficients between study variables

Dependent Variable **Independent Variable**	**Sustainable Development (Y)**
Green Taxes (X)	0.754 **

Source: Prepared by the researcher using SPSS-23.

**With 99% confidence, the number indicates a high level of significance.

The findings are shown in Table No. (9), where the dependent variable (sustainable development) and green taxes have a strong direct correlation with high significance (correlation coefficient of 0.754) at a 99% confidence level. This suggests that the first main hypothesis—that there is a statistically significant correlation between green taxes and sustainable development—is correct.

2- The impact of green taxes on sustainable development

Table (10): Results of the impact of green taxes on sustainable development

Independent variable	**Dependent variable**	**Coefficient of determination R^2**	**Regression coefficient (impact)**	**β Constant term**	**α Calculated t value**	**Calculated F value**	**Significance level P**	**Nature of the relationship**
Green taxes X	Sustainable development	0.569	0.809	0.824	**6.082	**36.995	0.000	High significance

	Y							
Impact relationship		Confirming the validity of the main hypothesis with high significance at a confidence level of 99%.						

**The value represents high significance with confidence (99%).

Source: Prepared by the researcher using SPSS-23

Table (10) shows the test of Green fees' effects on sustainable development. With a coefficient of determination (R2) of 0.569, the results show that green taxes influence sustainable development trends by 56.9%. Although the regression coefficient (β) of 0.809 indicates that an increase of one unit in green taxes leads to a rise in sustainable development, the remaining 43.1% is caused by factors not included in the model. At a significance level of (0.01), the computed (t) value (6.082) exceeded its table value of (2.467), and the calculated (F) value (36.995) shows that it exceeds the table value of (7.64) at a significance level of (0.01) with a 99% confidence level.

4. Conclusions and Recommendations

5.1 Conclusions

1. Taxes have several functions, but among their most important objectives are changing paths and correcting wrong trends in the economy, stimulating good practices and habits, holding harmful trends accountable, and educating to protect against clear or potential risks.
2. A sustainable environment encompasses more than just economic development; it also includes a wide variety of complex concerns related to the management of the economy, environment, and society, the latter of which are the foundations of sustainable development.
3. The state plays a significant role in sustainable development because it is mandated by the community to create laws, pass them, and ensure their proper implementation. It protects the rights of all members of society, whether they are consumers or producers, and handles all matters pertaining to the mobilisation of local resources, the mobilisation of savings, and the allocation of savings to investments.
4. The government must raise taxes in a fair and honest manner to boost savings, and this increase in savings should not result in the removal of incentives that promote economic activity.
5. Imposing green taxes on environmental pollutants contributes to giving a monetary value to the exploitation of environmental resources that are often exploited for free due to polluters dumping their polluting waste in various elements of the environment without compensation.
6. Using environmental taxes as an effective economic tool to reduce environmental pollution and direct consumer behaviour towards a green economic environmental culture and investing their revenues in development projects in the field of environmentally friendly renewable energy can bring about changes in environmental sustainability and help develop the economies of countries by ensuring that these taxes protect natural resources, which is positively reflected on the environment and helps in sustaining its development.
7. Green taxes' ability to generate positive effects on income distribution and resource allocation in society is not an intrinsic characteristic except in the part related to integrating external effects; in terms of their ability to enhance efficiency and justice, it depends on the mechanism of managing their revenues.
8. There are two approaches to using taxes to combat pollution: burden and incentive. The burden approach represents the principle of “whoever pollutes pays”, while the other approach represents the voluntary motivation of industrial companies to assume their responsibility in correcting the course of the environment by using tax incentives as a tool of encouragement in the field of combating pollution, preserving the environment, and sustainable development.

5.2 Recommendations

1. Consume resources moderately and efficiently, considering the best prices for resources, and setting time frames for replacing non-renewable resources with alternative, environmentally friendly resources.
2. Do not consume renewable resources at a rate faster than their ability to regenerate or in a way that could harm humans or life support systems on Earth, especially those that have no alternatives.
3. Increase the use of clean, renewable energy sources like wind, hydropower, and solar electricity..
4. Use traditional waste as a resource as much as possible, disposing of it when needed and in a way that does not harm humans and Earth's life support systems.
5. Eliminate toxic pesticides and chemical fertilizers, especially those that are considered harmful to the environment. In addition, extract products of the ecosystem, such as those used in agriculture, fishing, and logging, without harming natural capital.
6. Rehabilitate degraded environments as much as possible through green taxes or by creating appropriate conditions for natural restoration processes.
7. Adopt the principle of fining the polluter by enacting green tax legislation at the local level.
8. Exempting non-polluting devices and equipment from customs duties and sales tax to reduce the cost of obtaining them and allowing the deduction of instalments of loans to finance technology to treat environmental pollution from the tax base imposed on income.

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Appendix (1)

S/ Questionnaire Form

Dear Professors:

The researcher wishes to prepare research entitled ((The Impact of Green Taxes in Promoting Sustainable Development)) based on our confidence in your cooperation with us to complete this scientific research through your contribution by filling out the form according to the paragraphs provided therein, as the success of this research depends on the accuracy of your answer, so please adopt accuracy and objectivity in indicating the answer to the questions contained therein, hoping that this study will produce results that serve the scientific research, thanking you for your good cooperation with us and the sacrifice of your valuable time to support the scientific research, wishing you continued success and prosperity.

General Notes:

• In front of each paragraph, you will find (5) alternatives ranging from (I completely disagree, I disagree, I somewhat agree, I agree, I completely agree), so we ask you to indicate with a mark (√) under the answer that is chosen.

• Your answers will only be used for scientific research purposes.

Researcher

Personal data

Note: -Please mark (√) in the correct answer scale

1. Gender

Male
Female
2. Age
20-30
31-40
41-50
51 and over
3. Academic attainment
Bachelor's diploma
Higher diploma
Master's or equivalent
Doctorate or equivalent
4. Years of service
5 or less
6-10
11-15
16-20
20 and over
5. Job position
Official employee
Unit Manager
Division Manager
Section Manager
Branch Manager
First - Green Taxes Axis

S	Statement	Strongly agree	Agree	Neutral	Disagree Strongly	disagree
1	Green taxes are imposed on polluters who cause environmental damage due to their economic activities, estimated based on the quantity and degree of severity of pollution.					
2	Green taxes contribute to eliminating environmental pollution and achieving effective development in a clean environment.					
3	Green taxes provide new sources for achieving environmental sustainability.					
4	Green taxes contribute to directing producers and consumers towards products Environmentally friendly.					
5	Green taxes contribute to increasing tax revenues.					
6	Green taxes stimulate environmentally friendly innovations.					
7	Green taxes stimulate environmentally friendly innovations.					
8	Governments are responsible for intervening through a set of tools such as laws, regulations, innovation policies, subsidies, and environmental taxes to reduce the effects of pollution.					
9	The tax must be proportionate to the extent of the damage and its revenues must be used for the purpose for which it was enacted.					
10	Environmental tax reform contributes to reducing the damage to the environment resulting from production processes such as water and air pollution or fossil fuel consumption.					
11	The use of environmental incentives is more effective than imposing environmental taxes.					
12	The difficulty of identifying the polluter and the difficulty of determining the extent of pollution hinders determining the basis for imposing green taxes.					
13	Imposing green taxes leads to an increase in the cost of products and the effects on the prices of those products.					
14	Activating international agreements to resolve the problems of cross-border pollution for the contribution of all countries that cause environmental pollution.					
15	Environmental standards are a useful mechanism for improving the quality of production and reducing the effects of environmental pollution.					
16	The existence of international standards for measuring environmental pollution is one of the most important tools for environmental control.					

17	Activating many mechanisms that would preserve the environment, including environmental taxes and Economic and legal mechanisms in addition to enhancing the concept of environmental education to achieve environmental sustainability.					
18	Exempting modern equipment and devices used in the production of environmentally friendly products from customs duties contributes to reducing pollution.					
19	Granting soft loans to finance pollution treatment technology such as using solar energy instead of fossil energy enhances environmental sustainability.					
20	The polluter pays principle contributes to achieving social justice.					
21	Legislating tax laws to reduce the effects of environmental pollution and creating an effective tax system that takes into account the purpose of imposing the tax and the behaviour that must be changed and corrected and the people who must correct their environmental behaviour and determine the financial aspects contribute effectively to environmental sustainability.					

Second: The axis of sustainable development

S	**Statement**	**Strongly agree**	**Agree**	**Neutral**	**Disagree Strongly**	**disagree**
1	Sustainable development is one of the necessary areas for the sustainability of life. It is a development that does not focus on the environmental aspect only but also includes the economic and social aspects, i.e. it is a three-dimensional development that includes (the economic dimension, the social dimension, and the environmental dimension).					
2	Adopting environmental sustainability as a basic axis in studies to assess the environmental impact of projects and facilities to obtain environmental approvals and permits.					
3	Adopting environmental sustainability in the strategic environmental assessment of plans and programs to obtain accreditation Financial from the state's general budget.					
4	The necessity for the Ministry of Environment to assume responsibility for supervising the implementation of environmental sustainability assessment procedures and setting and interpreting specifications and standards for them					
5	Developing policies and programs related to encouraging the use of renewable energy sources, sustainable production and sustainable consumption projects, and following up on their implementation in coordination with the relevant authorities.					
6	Continuously promoting the concept of environmental sustainability, in addition to encouraging initiatives with gradual implementation, leads to the consolidation of the principle as an incentive rather than an obstacle through the cooperation of the relevant authorities with the Ministry of Environment.					
7	Integrating environmental issues into the main areas of economic development, taking into account the social and cultural dimensions of individuals in societies.					
8	Stopping unsustainable methods that harm the basic wealth of countries and working to protect them, while including green investments within economic stimulus packages.					
9	The transition to new energy sources is indispensable in light of the needs of countries and global transformations to a greener economy.					
10	Preserving the environment and ensuring the renewal of natural life is the standard.					