

Environmental policies in order to move towards a green economy

السياسات البيئية من أجل التوجه نحو الاقتصاد الأخضر

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Abstract:

This study aims to demonstrate the important role that environmental policies play in order to move towards a green economy. This is through preserving the environment and encouraging laws and regulations that protect it, as well as knowing the various policies that called for protecting the environment. We have found that there is an influence and influence relationship between the environment and the green economy. With the current changes in the world as a whole, it has become necessary to pay attention to the green economy because it is the main driver of sustainable development.as well as economic and social growth.

Keywords: Green economy, environmental economics, environmental policies,

Jel Classification Codes : Q56 ; Q52 ; Q57

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Introduction:

The transition or transformation towards a green economy is a necessity, an opportunity and at the same time a challenge that imposes itself in order to achieve sustainable development, especially in light of the current excessive consumption and use of natural resources in a way that exceeds the absorptive capacity of natural systems in addition to their ability to renew themselves, the effects of which are evident in the loss of biodiversity and emissions that cause global warming. Researchers believe that an economy that is directed towards preserving environmental resources and natural sustainability is not necessarily characterized by sacrifice and restrictions for countries, but can represent opportunities for development by focusing on the environmental dimension and the economic dimension that go hand in hand. Hence, new applications have emerged in economics that link both the environment and the economy through what is known as environmental economics.

Environmental economics is a field that studies the impact of economic activities on the environment. It also helps users design appropriate environmental policies and analyze the effects and benefits of current and proposed policies. Environmental policies are part of the general policies of countries that achieve their goals by increasing the cost of pollution and environmental damage activities, and reducing polluting behaviors and activities. At the same time, it supports investment and stimulates innovation in environmentally friendly technology. This is what specialists in environmental economics seek.

Many studies and applied research have tested Porter's hypothesis that "well-designed environmental policies may actually enhance productivity, support innovation, and achieve direct economic benefits in addition to environmental benefits" (Porter Michel 1991). On the gross domestic product, productivity of institutions, innovation, foreign direct investment and foreign trade, etc., as the latter are considered important activities on which the economy is based, in order to study the economic and environmental impacts of environmental policies and how they can contribute to the transformation or transition towards a sustainable economy or what is known as the green economy.

The problem: From what was previously mentioned about both the environmental dimension and the economic dimension, and given the importance of Porter's hypothesis (1991 Porter Michel) and the studies and research completed that are interested in studying the impact of environmental policies on economic activity as a whole and the environmental aspect, we will pose the following main question: - How can environmental policies contribute to managing the transition towards a green economy?

Sub-questions: -What is the concept of green economy? -What are the basic concepts related to environmental policies and environmental economics? -How do environmental policies affect economic activities?

Hypotheses: We adopt a single hypothesis for this intervention as follows: - Well-planned environmental policies achieve economic benefits in addition to environmental and social benefits.

Plan: In order to understand the subject, we decided to divide the study plan as follows:

- First axis: General information about the concept of green economy
- Second axis: The theoretical framework of environmental economics and environmental policies.

- Third axis: Results of the most important studies and research that adopted Porter's hypothesis.

Study Methodology: In order to answer the problem of the intervention, we used the descriptive method to cover the various basic concepts of the study, in addition to shedding light on the results of the most important studies and research that adopted Porter's hypothesis.

I - General information about the concept of the green economy.

Green economy has multiple definitions and significant importance for the world as a whole.

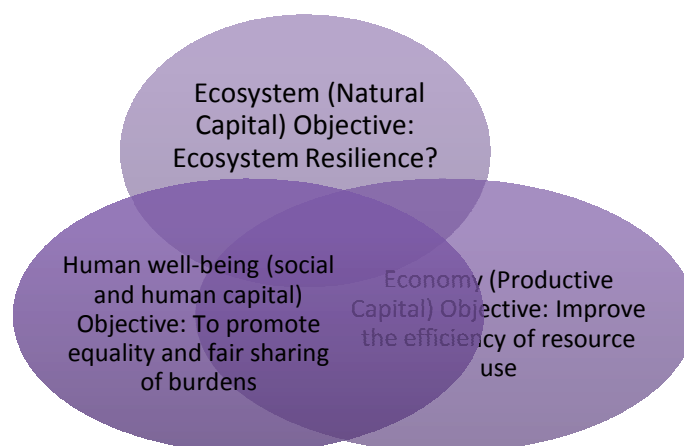
It has an impact on the environment, so the concept of the green economy must be defined.

I-1- Green economy: concepts and terms

The green economy is an environmentally friendly economy that seeks to achieve sustainable economic development by preserving it, not compromising its components, and not risking it by striving towards afforestation and planting a culture of preserving the environment. There is no unified definition of the green economy. The United Nations Environment Programme has defined it as the economy that enables the preservation of the environment and the achievement of humanity's endeavor in light of the scarcity of environmental resources, especially those that are non-renewable in the world.

The following figure represents the concept of the green economy within the framework of the concept of sustainable development. (Kalamova & N. Johnstone, 2011, p. 66)

Figure n°1: Green economy within the framework of the concept of sustainable development



Source : kanianska, Radosolva. **Green growth and Green economy.** s.l. : cultural and education grant agency of the MESERS, 2017. ISBN,987-80-557-1257-4.,p26

We provide other definitions of the green economy as follows:

- “It is an economy that is compatible with economic growth and sustainable environmental development, as both serve the green economy and both complement each other.”
- By developing carbon emission reduction strategies, they are “plans that look forward to national economic development or strategies that include emission reduction and/or climate-resilient economic growth” (OECD).

I-2-Objectives and principles of the green economy: We can address the basic objectives of the green economy as follows(Winefield, 2014, p. 87):

- Preserving and restoring the natural environment ;
- Protecting and caring for public health,
- Increasing social justice through the green economy;
- Strengthening local independent companies and institutions,
- Reducing poverty by creating good green;
- collar jobs (green jobs).

I-3-Green economy and green wealth.

The term green economy is linked to other concepts such as green wealth and reducing carbon emissions. We will discuss these concepts as follows:

- The green economy is related to many materials found in nature, for example, it reduces the emission of carbon dioxide, which is harmful to health and the environment as a whole. The green economy is related to the wealth found in nature, as it seeks to preserve it and protect it from random use.. (OCDE, december2014, p. 11)
- Reducing carbon emissions: reducing the use of fossil fuels as a driver of development (also referred to as climate-resilient development).

II- The theoretical framework of environmental economicsand environmental policies.

Environmental economics is concerned with theoretical or empirical studies of the economic impacts of national and local environmental policies around the world. Special issues include the costs and benefits of alternative environmental policies to address air pollution, water quality, toxic substances, solid waste, and global warming.

II-1 The concept of environmental economics:

Environmental economics is defined as “the science that measures the theoretical and applied aspects of economic life with environmental standards with the aim of maintaining an environmental balance that ensures sustainable growth”. It can also be defined as “the science that is concerned with studying the impact of economic activities on the environment and the nature of the importance of the environmental system to the economy and suggests appropriate ways to organize economic activity in order to ensure balance, as environmental economists are interested in

identifying the problems that must be corrected, considering that there are many ways to solve the problem”.(Winefield, 2014, p. 56)

II-2 -Environmental policies:

Environmental policies are linked to the general policies of the state, as they are considered part of the general policy and necessary for a better human future. The mission of environmental policy is not limited to treating existing environmental damages, but rather goes beyond that to demand avoiding environmental problems and reducing the risks resulting from them as much as possible. It also seeks to find and develop the necessary and effective procedures to protect human health, life and value from forms of pollution. This policy applies to drawing clear outlines for goals that are applied at various levels, undertaken by official bodies and proceed from planning to implementation and finally evaluation and assessment.(Morales, rafael, & and al, April 2016)

❖ The concept of environmental policy:

- According to Lundqvist, “It is a set of measures intended to influence society, in terms of values, beliefs, behaviors and organizations, in order to improve or prevent the deterioration of the natural quality of the environment.”
- “It is that package of broad outlines that reflect the rules and procedures that determine the method of implementing the environmental strategy, while specifying the tasks of the various participating institutions, bodies and units responsible for the results of this strategy, under the umbrella of the binding legislative orders for each of these bodies. It ultimately clarifies the method of evaluating the results according to the objectives that were previously determined, with clarification of the mechanisms for correction and development.”(Winefield, 2014, p. 87)
- Environmental policies are linked to the general policies of the state. They are represented by the general directives related to the environment for an organization (company, institution, association or body) issued officially by the highest level of administration.(Morales, rafael, & and al, April 2016, p. 102)

❖ Environmental policy objectives:

The optimal environmental policy is one that seeks to balance the benefits that accrue to society from economic activities related to environmental pollution with the damages resulting from pollution. In this context, the integrated environmental policy works to achieve:(Eropean commission, october 2007, p. 51)

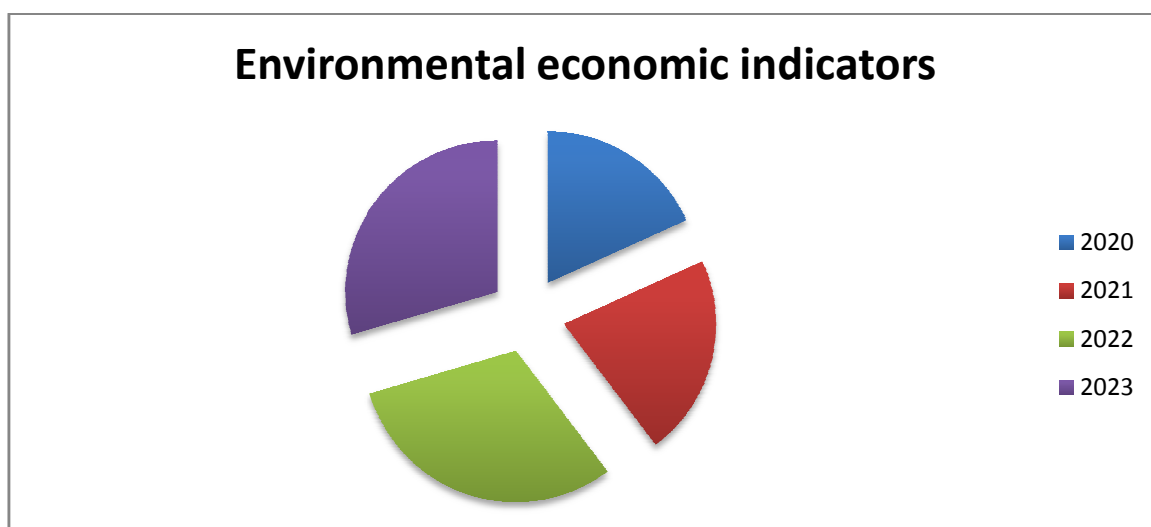
- Reducing practices and activities that have led and continue to lead to the deterioration of environmental resources, or regulating those activities in a way that ensures addressing the sources of pollution and mitigating its environmental impacts as much as possible.
- Restoring the optimal status of the important components of the environment, and their physical, chemical and biological properties, in order to ensure the continuity of their absorptive and productive capacities as much as possible.
- Taking environmental considerations into account in the development plans of various sectors, and including environmental impacts and how to address them in the early stages of feasibility studies for economic and social projects.
- Funding objective means raising funds that will cover the costs of impacts on the environment or that will be distributed to promote prevention or restoration activities in environmental quality or research and development.

❖ **Environmental policy tools:** There are several classifications of environmental policy tools, the most important of which are as follows:

- ✓ Environmental policy tools used by governments to implement environmental policy decisions can often be classified into three categories as follows:(Mihici;HAKan;Cagatay;koksa, 2004, pp. 98-110)

- Basic environmental policy tools: They are directed with the intention of directly changing the behavior of individuals, families, communities and institutions. These tools include the use of regulations and laws to prevent or control certain activities, the imposition of taxes, fees and incentives by the government to encourage or prevent certain activities, the creation of markets for environmental services such as sequestration or storage of greenhouse gas emissions and the dissemination of information about pollution and the environmental impacts of activities carried out by individuals, public information and educational campaigns at the individual, family or classroom level, and the encouragement of voluntary actions by companies, communities and individuals to manage or mitigate the environmental impact of their activities.
- Preventive environmental policy tools: Preventive tools focus on modifying decision-making processes regarding policies and projects that may affect the environment, rather than directly changing the behaviors of individuals and institutions. Environmental assessment processes are among the most important tools of preventive environmental policy. The goal of these processes is to take the environment into account in the decision-making process, which is usually not present during the decision-making process.
- Institutional Environmental Policy Tools: These strategies focus on creating or using special agencies within or outside government to act as focal points for policy development, implementation, and evaluation or to provide specific services, such as regulating activities that pose a risk to public safety and the environment, or to manage natural resources.

Figure n°2 environmental economic in the world



Source :<https://dualcitizeninc.com/global-green-economy-index/>

- ✓ Environmental policy tools can be divided into regulatory environmental policy tools, economic environmental policy tools, and the use of information as environmental policy tools:
- Regulatory environmental policy tools: It aims to modify a set of options for operators. The tools used include environmental standards, bans, exploitation licenses, zoning, and restrictions on the use of resources. The use of these tools is considered the most common approach to government interventions in the environmental policies of industrialized countries. This approach is called "command and control" with varying degrees of justification.
- Information-based environmental policy tools: It aims to change the priorities and interests of those dealing with environmental issues and is known as "discourse" tools, or "persuasion tools". These tools are represented in media campaigns, training, and measures taken to

disseminate real information by the private sector, such as the use of eco-labels and environmental management systems.

- Environmental economic policy tools: They are institutional measures to change the economic environment of pollution (i.e. benefits and costs) by means of “price” signals to encourage voluntary adoption of less polluting behaviours.

III- Economic instruments:

are used to protect the environment and achieve sustainable development, which leads to increasing the costs of activities that have negative environmental impacts, or to reduce the costs of activities that are beneficial to the environment through taxes, collection, emissions trading, financial guarantees, etc., which are examples of economic instruments. The most important economic instruments used are environmental taxes, such as taxes on polluting emissions and noise, taxes on products, taxes on the use of natural resources, royalties on services provided, and through providing subsidies directed at reducing the pollution process, unlike taxes, in addition to tradeable licenses, where the regulatory body allows a certain volume of pollution emissions and issues licenses for that, and finally through the rules of legal liability, forcing the person responsible for environmental damage to financially compensate the various victims.

III- 1-Results of the most important studies and research that adopted Porter’s hypothesis.

In this axis, we will rely on a group of theoretical and experimental studies that were interested in studying the economic effects of the strictness of environmental policies or legislation, which adopted Porter's famous assumption that the strictness or strictness of environmental policies has effects on economic activity, for example, competitiveness and innovation, in order to reach results regarding the problem of intervention, which we will address as follows: (Morales, rafael, & and al, April 2016, p. 77)

1. Environmental and production policies: According to the OECD, there is new evidence that strict environmental policies do not have a negative impact on productivity growth. There are winners and losers, but these effects fade quickly. At first, strict environmental policies lead to a slowdown in productivity growth in a country. This may be because companies in this country anticipate changes and on this basis make preparations based on new operating conditions. This is then followed by an increase in productivity growth without incurring losses. This is reflected in the data.

For more technologically advanced organizations, productivity gains are boosted as regulations become more stringent, as they move to take advantage of the benefits and opportunities resulting from technological advances, or “green opportunities,” while less technologically advanced organizations experience a decline in productivity. The more stringent environmental policies are designed, the more benefits there are for the environment without any loss in productivity. (Jacob, Klaus, Quitzou, & Rainer, 2014, p. 23)

2. Environmental policies and export competitiveness: Environmental policies may improve the trade balance in two ways: by supporting exports (especially environmental industries) on the one hand, and by reducing resource use reducing the use of certain types of imported resources. Critics argue that environmental policies may increase costs and negatively affect competitiveness, but evidence suggests that these negative effects are offset by the growth of new environmentally friendly products with export potential. Advanced environmental policies force industries to innovate and adapt quickly, giving them a competitive advantage and positioning themselves well against foreign competitors. High standards for environmental products also drive innovation and create export opportunities over time.

3. Environmental policies and innovations: Environmental policies are a stimulating factor for innovations. Several environmental legislations have contributed to innovations in various sectors such as energy supply the automotive industry, and Potter (Porter) suggested that “properly designed environmental regulations can lead to innovations that can partially or completely offset all the costs of compliance with these policies.”

Environmental policies are a catalyst for innovations in the field of developing the environmental economy through the legislation regulating it. Several studies have indicated the importance of regulatory laws in caring for the environment.

4. Environmental Policies and Employment: Understanding the economic effects of environmental policies requires an assessment of the direct and indirect economic impacts. In general, environmental policy has positive effects on employment. Environmental policies achieve employment goals because they aim to correct the current trend of economic overuse of natural resources and underuse of human resources. As for the negative effects on employment, they are scattered and not largely concentrated in a specific sector or location. These imbalances are often offset by well-designed policies.

Environmental policies have positive effects on creating job opportunities in various sectors of the economy, particularly in activities such as renewable energy, waste recycling, pollution control, modern technology and bioproducts, tourism, in addition to the fact that they may negatively affect some activities and sectors such as fossil fuels, intensive manufacturing processes, and others.

As for the general effects on employment, empirical studies confirm that well-designed environmental policy measures play a positive role in job creation, especially through:

- Helping to shift production to sectors and activities that require intensive labor.
- Supporting the creation of new jobs in green industries.
- Helping to revitalize areas with high unemployment rates through structural policies.
 - Shifting the tax burden from labor to environmentally harmful activities.
- Bringing about stronger economic impacts associated with certain activities.
- Increasing demand for skills and training.
- Opportunities to benefit from currently idle labor. (Rayment; Matt and al, November 2009, p. 45)

5. Environmental policies and foreign direct investment: To study the impact of environmental policies on the direction of foreign investment flows towards countries of the world, we focused on studies that addressed the “pollution haven” hypothesis, which states that there is a relocation of polluting industries from developed countries to other countries where environmental standards are low and the cost of compliance with environmental regulations is lower.

There are several previous studies as experiments on some leading countries in this field that concluded that there is a correlation between environmental policies that encourage respect for the green economy and foreign direct investment.

-A study by (Kalamov, M. and N. Johnstone 2011) to investigate whether countries with low environmental regulations have a competitive advantage in attracting foreign investment by analyzing a wide sample of receiving and host countries. The results of the study support the idea that the stringency of environmental policies relatively affects the pattern of foreign investment, but this effect remains relatively small compared to other factors, and the relative effect of the stringency of environmental policy in the host country decreases after a certain threshold. (Kozluk & zipper, 2014, p. 23)

Most studies on the relationship between environmental policies and legislation and foreign investment support the "pollution haven" hypothesis. Therefore, it can be said that the level of strictness and sustainability of environmental policies through regulations and legislation has an impact on foreign investments and choices of factory and project locations.

6. Environmental and public finance policies: Environmental policies have a positive impact on public finances by: Raising revenues and expanding the tax base through the imposition of environmental taxes that can be used to enhance public revenues and reduce other taxes, and also by reducing environmentally harmful subsidies in the agriculture, energy and transportation sectors.(OCDE, december2014)

7. Environmental policies and building a strong capital base: A strong capital base is essential to a healthy and successful economy. Because it determines the productivity of an economy and its ability to provide the goods and services needed to meet people's needs, environmental policy can contribute to different forms of capital(Mihici;HAKan;Cagatay;koksa, 2004, p. 98):

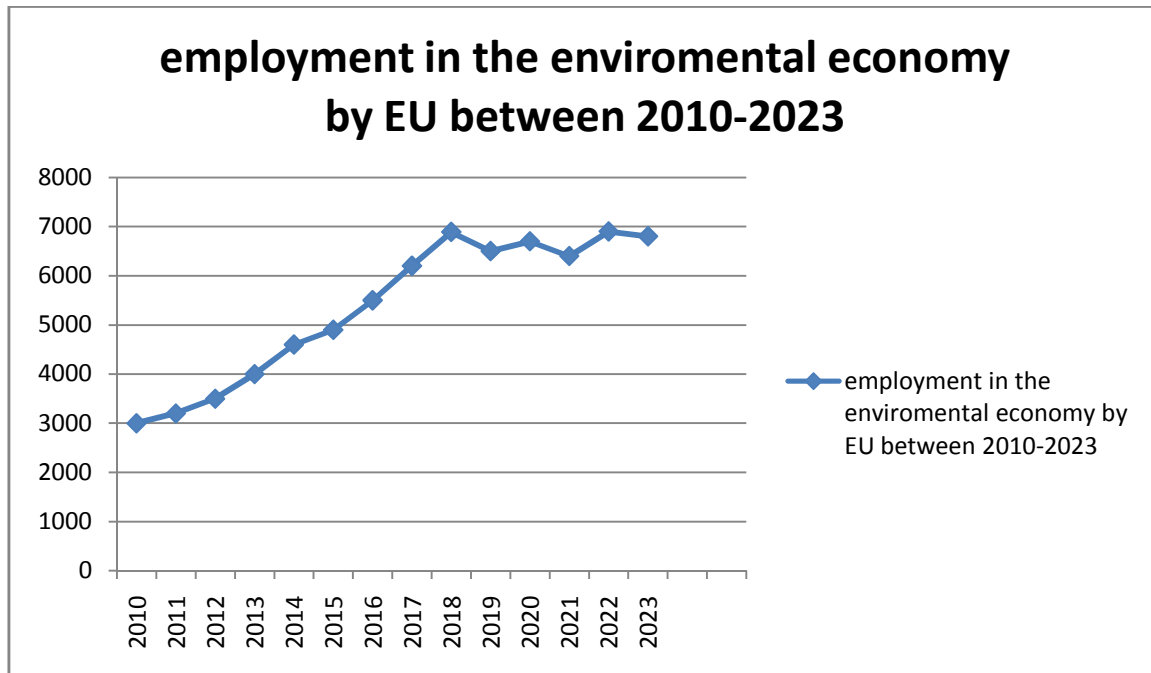
- By improving standards and requirements for new buildings, retrofitting existing buildings, and investing in infrastructure, energy and transportation.
- Protect and enhance natural resources such as forests, fisheries and water resources (natural capital).
- Investing in systems such as air quality monitoring, pollution reduction, energy efficiency, waste management and recycling, water treatment and management, which provide productive services to the economy (monetary capital).
- Investing in environmentally relevant skills and promoting the health and well-being of the workforce, environmental policy helps address health problems caused by poor environmental quality, by improving the quality of the natural environment, it also enhances opportunities for recreation and relaxation and thus contributes to the physical and mental health of the individual (human capital).

8. Environmental policies and economic and social cohesion:Environmental improvements play an important role in promoting economic and social cohesion, contributing to:(T & Assman C, 2017, p. 56)

- Improving the quality of life and regional image.
- Promoting the health of the workforce and thus improving productivity; making regions more attractive places to live, work, visit and invest and providing opportunities for regional branding and marketing.
- Promoting resource efficiency and risk prevention, reducing production costs and enhancing competitiveness, as well as reducing the costs of damage and disruption caused by pollution.
- Innovation and development of green industries, enhancing regional productivity by stimulating the growth of knowledge-intensive, high-value-added and enterprise growth, and providing new opportunities for employment and skills development.

Figure n°3 employment environmental economy in the world between 2010-2023

IN THOUSAND FULL TIME EQUIVALENT



Source: <https://ec.europa.eu/eurostat/statistics->

9- Environmental policies and the transition to a more resilient and sustainable economy

Environmental policies contribute to managing the transition to a more resilient and sustainable economy:

- By encouraging economic restructuring and modernization, and supporting new, clean and sustainable economic activities.
- Improving energy, food and resource security, and thus the ability to withstand external shocks (Sauvage, 2014, p. 46).
- Reducing the economy's vulnerability to climate change and other environmental impacts.

Conclusion:

By reviewing a sample of the most important research and studies on the impact of environmental policies on productivity, innovation, foreign direct investment and improving export competitiveness, it can be said that environmental policies through their various tools contribute to or push towards managing the transition towards a sustainable economy. Researchers believe that in order to design the transition to a green economy, a combination of policies is required that direct investment and innovation processes towards material-saving and emission-reducing production processes through appropriate conditions. Economic researcher Porter prefers strict and at the same time flexible economic environmental policy tools such as pollution fees or tradable emission permits, as these economic tools are likely to enhance innovation more than tools based on control and domination in order to give companies more freedom regarding the technology used to reduce pollution.

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