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IMPACT OF ECONOMIC GROWTH ON ENVIRONMENT DEGRADATION

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Abstract

An increasing number of people are worried about the unabated increase in emissions and how it will impact the global warming that is destroying the planet. The body of research has nearly reached the conclusion that economic expansion and activity have a major role in environmental deterioration. There is no shortage of empirical research on the relationship between environmental deterioration and economic growth, despite the abundance of studies on the impact of the former on the latter. On the other hand, the related literature suggests that achieving economic expansion is linked to a rise in environmental deterioration. This study investigates the possibility of a relationship between the increase in environmental degradation and economic growth, in order to inform the formulation of non-conflicting environmental and structural policies. It also looks at the ways that environmental deterioration could influence economic expansion. The two-step dynamic system-generalized approach of moment methodology was used to regulate endogeneity in a worldwide panel of 140 nations spanning the years 1980 to 2021. The results typically point to a negative impact of environmental degradation on economic growth.

Keywords: *Environment Degradation, Economic Growth, SDGs, FDI, Emissions.*

Introduction

The impact of environmental sustainability and deterioration on economic growth is examined in this research. The 21st century has seen an increase in demand for environmental sustainability beyond anything seen previously. This comes after environmental risks have increased unnecessarily. According to the World Economic Forum (WEF), environmental risks account for four of the top five threats the world faces and are among the five most likely long-term global risks (WEF, 2021). SDGs (sustainable development goals) are thought to be most threatened by environmental concerns arising from environmental degradation. This is true since environmental threats have an impact on

every community, business, and person. It's a risk to which no one can be immune, and there is no global vaccination against it. The primary driver of climate change, carbon dioxide emissions, have been a key contributor to these dangers. In 2018, the United States released its Fourth National Climate Assessment report, which issued a warning that global economic disruption from climate change might occur if greenhouse gas emissions are not curbed. According to the research, the agriculture, forestry, fisheries, and tourist industries are adversely impacted by climate change. The research goes on to say that the increasing risks and vulnerabilities brought about by climate change pose a growing threat to public health and safety, quality of life, and economic

growth rates. Over this century, climate change is predicted to hamper economic growth and cause rising damage to property and infrastructure in the absence of large and ongoing global mitigation measures. The literature and policy debates have focused a great deal of emphasis on the growing worries about environmental degradation and climate change. Within the context of environmental degradation, the economics literature has primarily focused on how economic growth affects environmental deterioration.

Review of Literature

Adolfo, Figueroa (2022) “economic growth and the environment” Based on Georgescu-Roegen's theory, which applies thermodynamic principles to the economic process, Adolfo Figueroa's work provides a basic theoretical model of the relationships between economic growth and the environment. In mainstream economics, Robert Solow's 1974 study is considered a standard reference, despite some shortcomings that have not yet been addressed by recent research. Nicholas Georgescu-Roegen (1971) used a unique approach by relating thermodynamic principles to the economic process. The entropic model presented in Figueroa's research suggests that economic processes of distribution and development currently occur in the context of environmental distress, and that waste is an inevitable byproduct of manufacturing due to the first law of thermodynamics.

Theodore, Panayotou. (2021). “Economic Growth and the Environment” The research on the relationship between environmental sustainability and economic development is thoroughly analysed and summarised in the paper. It looks into two areas of research: one is theoretical and includes macroeconomic models of the relationship between environmental degradation and economic growth, and the other is empirical and uses ad hoc specifications and estimations of a reduced form equation to relate environmental impact indicators to per capita income. According to the author, macroeconomic models provide substantial support for the empirical findings of the Environmental Kuznets Curve research. The report suggests developing alternative macroeconomic models that

accommodate a more realistic role for government, as well as conducting additional empirical research on the concept of additive separability.

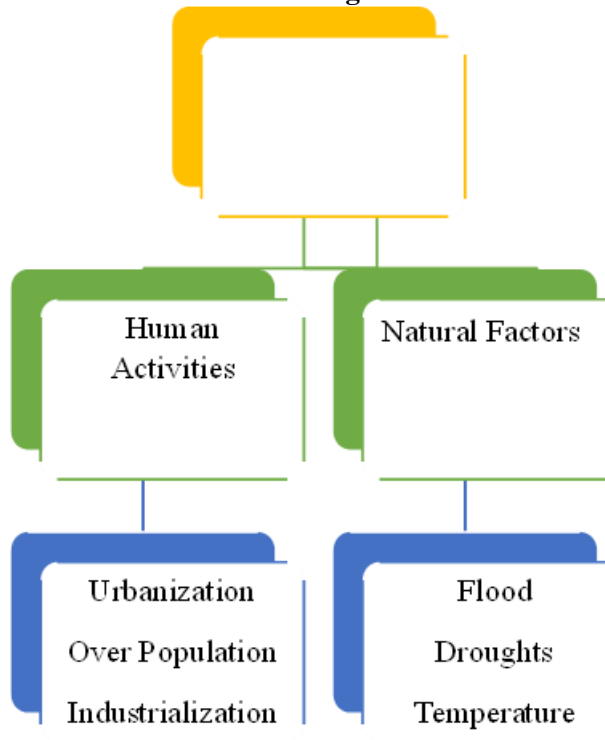
William, A., Brock., M., Scott, Taylor. (2019) “Economic Growth and the Environment” This article discusses and assesses the theoretical literature linking economic growth to environmental quality. It is focused on the relationship between environmental limits and economic growth, the growth limitations imposed by these constraints, and the opportunities for future research. The review provides an integrated assessment of current knowledge, reports on new empirical findings, and identifies important open theoretical issues. Although not included in the study, the paper mentions the possibility of a composition impact causing changes in the fleet of cars. The rise in lead per gallon of petrol among low-income individuals may be due to the composition effect.

De, Bruyn., M, Sander. (2016) “Economic Growth and the Environment: An Empirical Analysis” According to the author, implementing efficient environmental solutions can improve a nation's chances for economic growth, and taking steps to increase those chances can facilitate the resolution of environmental issues. It is usually less expensive to prevent pollution or environmental damage than to cause it. Market forces alone will not be sufficient to resolve environmental challenges; instead, some form of tax, law, regulation, or framework for negotiations will be required. Without regulations, environmental deterioration might worsen and eventually limit economic growth. The best way to reduce the damage that economic activity causes to the environment is to employ eco-friendly technologies and practices. Reducing waste and inefficiencies and implementing environmentally friendly technology and practices are more efficient ways to relieve environmental restrictions than restricting population growth. The behavioural responses that environmental legislation can elicit, such as substitutions and managerial and technical advancements leading to environmentally friendly practices, are what make them effective. Low-income communities suffer disproportionately from pollution.

Ian, Hodge. (2015). “Impact of Economic Growth on the physical Environment” The study looks at the relationship between environmental quality and economic growth and makes the case that environmental degradation is not caused by economic growth. The research examines many theories regarding this connection and assesses them experimentally for a range of environmental pressure markers. The trials' findings suggest using alternative estimation techniques, which may alter conclusions on the relationship between environmental degradation and economic growth. The essay also explores the processes that industrialised countries use to reduce pollution.

Impact of Economic Growth on Environment

Causes of Environment Degradation



There are things we can do to slow down the deterioration of our surroundings. Completing the legal framework is the most efficient way to reduce pollution and depletion. The current legal system has some shortcomings that subtly favour wrongdoing. In order to prevent illicit activity, the government must improve the way it closes gaps in the legal system. It is imperative that regulations pertaining to the exploitation of natural resources be amended, as the primary cause of biodiversity loss is overexploitation. The government has long influenced how it

views social and economic approaches to the pollution problem, but there is still little use of these strategies. Restoring our ecology and eradicating environmental pollution will not happen with a single effort. All levels of authority must be involved in the formulation of policies as well as their execution and oversight in order to achieve the country's long-term environmental goal and promote sustainable development.

Research Methodology

The dynamic reduced-form model is used in this study to calculate how environmental deterioration affects economic growth. The idea that the impact of environmental degradation is nonlinear is tested in this study. We begin with the squared term of environmental degradation in order to investigate the nonlinear impact of environmental degradation on economic growth. The empirical model that accounts for the influence of nonlinearity on economic growth.

Descriptive Variable Statistics

Descriptio	Mea	Standard	Min	Max
GDP per	8.475	1.48	5.119	11.63
Physical	3.071	0.35	-0.309	4.493
Human	4.169	0.66	0.910	5.099
EDI	0.475	1.68	-	6.107

Conclusion

Economics has studied economic growth in great detail as it is a complex and wide-ranging topic. Since consistent and inclusive economic growth may raise living standards and improve the quality of life for their citizens, most governments see it as a crucial goal. But in order to ensure that economic growth is sustainable and advantageous to all societal members, careful planning, policy execution, and monitoring are needed. It is important to emphasise that the impact of economic growth on the environment varies by country and is influenced by things like industrial structure, degree of development, and political actions.

The goal of sustainable development is to achieve a balance between social progress, environmental preservation, and economic growth. This usually means putting policies and procedures into place that improve resource efficiency, lower pollution, and safeguard natural ecosystems. In order to address global environmental issues like climate change that are connected to economic growth, international cooperation and

agreements are also necessary. In summary, there is a close relationship between economic expansion and the environment. Although it provides the goods and services needed to maintain economic activity, unchecked economic growth has the potential to devastate the environment. For businesses and politicians, striking a balance between environmental sustainability and economic development is a big challenge that often calls for the adoption of programmes that support green growth and prudent resource management.

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