

The Economic Impact of the Global Warming

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Abstract. Global warming is a phenomenon that causes the average surface temperature of the Earth to rise due to an increase in greenhouse gases. This rise in temperature has significant implications for the global economy, as it affects various sectors and regions differently. This paper reviews the literature on how global warming impacts the economy, focusing on four main aspects: gross domestic product (GDP), inflation, energy industry, agricultural, production output in different fields and tourism. The article also explores the cost-effectiveness of enacting strategies to alleviate and adjust to the financial consequences of global warming. The research finds that global warming could reduce GDP by up to 18% by 2050 if no action is taken, and that the costs of mitigation and adaptation are likely to be lower than the costs of inaction. The paper concludes that global warming is a systemic risk that requires urgent and coordinated action from governments, businesses, and individuals.

Keywords: Global warming, economic impacts caused by global warming, mitigating economic influence.

1. Introduction

Global warming is the increase in the average surface temperature of the Planet caused by an increase in greenhouse gases such as carbon dioxide, methane, and water vapor. The rise in global temperature is one of the world's most pressing environmental issues today. Global warming significantly impacts the economy, from agriculture to tourism to financial markets. This essay will examine the impacts of global warming on the economy, including the effects on the gross domestic product, inflation, energy industry, agricultural and food supply, and production output. Moreover, the exposition will look at the cost-benefit examination of setting up arrangements and strategies to diminish the financial impacts caused by worldwide warming and climate alter.

2. The Economic Impacts Caused by Global Warming

2.1. GDP

The rise of greenhouse gases in the atmosphere causes global warming, which considerably affects the GDP. According to the Swiss Re Institute, a 3.2°C increase in global temperatures and the inability to fulfill net-zero emissions targets could result in a loss of up to 18% of the global economy's GDP by 2050 [1]. The International Monetary Fund warns that climate change can cause significant economic damage and pose worrisome tail risks. It is a global externality where one country's emissions affect all countries by increasing the heat-warming gases in the atmosphere from which warming results [2]. Bloomberg Economics has constructed long-term GDP predictions for key economies based on three modeled scenarios, including a "hot planet" in which temperatures will climb an additional two degrees by 2050 [3].

2.2. Inflation

A significant cause for concern is the impact of global warming on economic growth and inflation. According to an analysis by Schroders, the long-term repercussions of climate change would undoubtedly be detrimental to global economic activity [3]. Temperature increases could result in decreased productivity, more significant energy costs, and higher food prices, among other variables, which could ultimately impact a country's economic growth. Climate change has significant impacts

on various sectors such as energy, agriculture, food production, and inflation, which are discussed in a UK report [4]. Global warming is anticipated to impact the energy sector by altering the demand and supply of various energy sources. Changes in weather patterns and an increase in pest and disease pressure are also likely to impact agriculture and the food supply severely. It might significantly affect production output and inflation, leading to higher costs for products and services, which could reduce consumer confidence and spending.

2.3. Energy Industry

Also likely to be affected by global warming is the energy industry. The primary source of greenhouse gas emissions contributing to global warming is the combustion of fossil fuels like coal and oil. Governments and industries worldwide are transitioning towards renewable energy sources, such as wind and solar power, to reduce greenhouse gas emissions. However, the transition to renewable energy is complex and fraught with obstacles, including high costs and infrastructure problems. Due to harsh weather, global warming could destroy energy infrastructure, such as power plants and oil rigs [4].

2.4. Agriculture

Agriculture is one of the most affected industries by global warming. Changes in temperature, precipitation patterns, and extreme weather events such as floods and droughts can substantially affect crop yields and livestock output. As a result of global warming, pests, and illnesses are on the rise, which can damage crops and lower yields. Reduced crop yields could result in food shortages, raising food costs and diminishing food security. In addition, global warming could affect the site of agricultural production when some regions become too hot or too dry for particular crops. This may result in the displacement of farmers and substantial alterations to global trade patterns [4].

2.5. Production Output in Different Fields and Tourism

The effect of global warming on production output is multifaceted and sector- and region-specific. According to the Schrodgers analysis, sectors dependent on weather patterns and natural resources, such as agriculture, fishing, forestry, and tourism, are particularly susceptible to the consequences of climate change [5]. Changes in precipitation patterns, temperature extremes, and the occurrence and intensity of extreme weather events can result in crop failure, water scarcity, and damage to infrastructure, all of which can decrease production and output. Similarly, supply chain interruptions induced by extreme weather events can result in decreased output in manufacturing and other businesses.

Environmental changes and natural resources are expected to affect industries such as tourism and fishing adversely. For example, coral reefs, which are crucial for the survival of marine life and attract tourists, could be destroyed by rising sea temperatures, which would harm economies depending on tourism. Similarly, the profitability of fisheries, which depend on marine life, could be impacted by changes in ocean temperatures and acidity levels. The economic impact of global warming is not confined to the businesses listed above. Due to the increased frequency of heatwaves, floods, and droughts, the overall economic implications of global warming may include health care expenses. In addition, the impact of global warming on vulnerable populations, such as low-income households, might be severe, resulting in less access to essential resources such as water, food, and healthcare.

3. Mitigating the Economic Influence of Global Warming

3.1. The Reason for Mitigating the Economic Influence of Global Warming

While the impact of temperature appears to lessen from year to year, it can create enormous gains or losses over time. It is similar to a savings account in which modest variances in interest rates can result in enormous variations in account balances after 30 or 50 years, "Diffenbaugh, the Cara

Foundation Professor at the School of Earth, Energy, and Environmental Sciences at Stanford University, stated. For instance, India's exposure to climate change may have been minimal during the past few decades [6]. However, the cumulative effect of decades of consequences has resulted in a gross economy that is 31 percent lower than it would have been without global warming. " Moreover, tackling the economic consequences of global warming will require international cooperation and collective action. The Paris Agreement, adopted by over 200 countries in 2015, intends to keep global warming far below 2 °C and strives to keep it below 1.5°C. The accord establishes a framework for international cooperation to cut emissions and adapt to the effects of global warming. Minimizing the economic effects of global warming is crucial.

3.2. The Different Ways for Mitigating the Economic Influence of Global Warming

Reducing the greenhouse gas emissions contributing to global warming is one approach to mitigate its economic effects. This can be accomplished by implementing laws encouraging renewable energy, energy efficiency, and carbon pricing. These policies can reduce the demand for fossil fuels and facilitate the transition to a low-carbon economy by incentivizing clean energy. In addition, carbon pricing can send a signal to firms and individuals to minimize their carbon footprints and transition to cleaner technologies.

One of the most significant economic effects of global warming is its influence on agricultural production and food security. Changes in temperature and precipitation patterns are anticipated as a result of climate change, which will have a substantial impact on agriculture. This will decrease crop yields, increase pest and disease issues, and decrease livestock productivity [7]. Thus, it is essential to address the effects of global warming on agriculture. This can be accomplished through promoting sustainable agricultural practices, investing in research and development to improve crop yields and pest control technologies, and offering financial assistance to farmers impacted by climate change.

Water security is another effect of global warming on the economy. Climate change is anticipated to increase the frequency and severity of both droughts and floods. This will substantially influence water availability and quality, as well as water-reliant businesses such as agriculture, tourism, and energy generation [7]. To address this issue, it is crucial to undertake water conservation measures, such as increasing water use efficiency and decreasing water waste. Investing in water storage and management infrastructure, such as dams and reservoirs, can also assist in minimizing the effects of droughts and floods.

4. Limitations of Mitigating Economic Influence of Global Warming

The economic impact of global warming is a complicated topic with potential advantages and substantial drawbacks. Nonetheless, it is crucial to recognize that there are limitations to this issue's resolution [8].

The difficulty of calculating the consequences of global warming is a barrier to assessing its economic effects. It is not easy to forecast the long-term economic effects of global warming due to the numerous variables to consider. For instance, global warming influences the global economy's terrain, altering development zones, coastlines, and locations where humans feel at home [9]. These variables have unpredictable effects on economic activity, making it impossible to assess the precise economic impact of global warming.

Another restriction is the difficulty in precisely quantifying the economic costs and rewards of combating global warming. Transitioning to a low-carbon economy entails high costs, such as investing in renewable energy infrastructure and enacting governmental initiatives to minimize carbon emissions. Nevertheless, evaluating the advantages of such efforts is frequently tricky, such as minimizing the risk of natural disasters and maintaining ecosystems [10]. This makes it difficult for politicians to balance the costs and advantages of global warming mitigation appropriately.

5. Conclusion

In conclusion, the effects of global warming on the economy are intricate and extensive. Governments must address this challenge cooperatively by lowering greenhouse gas emissions, investing in renewable energy, and constructing climate-resilient infrastructure. Failing to address global warming can lead to catastrophic economic losses and a decline in quality of life. Collaborating is essential to prevent the adverse consequences of global warming on the economy and the environment.

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