

Chapter 1

Global Warming, Climate Policy, and the Green Paradox

Gheorghe H. Popescu

Dimitrie Cantemir Christian University, Romania

Elvira Nica

Bucharest University of Economic Studies, Romania

ABSTRACT

Scholarship about the role of managed systems when considering the impacts of climate change, the environmental problem arising from polluting-resource use, the economic aspects of strategies to slow climate change, and the connection between climate change and economic growth has increased and consolidated, especially in recent years. The main objective of this chapter is to explore and describe the effects of climate policy on greenhouse gas emissions, the societal aspects of climate change, the technology-based determinants of green growth, and the productivity impacts of environmental quality. The results of the current chapter converge with prior research on the harmful results of climate change, reduced use of polluting inputs as a consequence of environmental policy, the prevailing governmental policies for fighting global warming, and measures to mitigate the temperature increase by reducing CO₂ emissions.

1. INTRODUCTION

The material gathered in this study provides a rich and diverse context for understanding the economic impacts of climate change, the mechanisms involved in climate change, effective policies to slow global warming, and the relationship between climate anomalies and the influence of human activities on climate evolution. The findings of this study have implications for the long-run costs of climate change, processes associated with global warming, the costs of ecosystem effects triggered by the rising CO₂ concentrations and climate change, and the implementation of optimal environmental policies.

The worldwide climate change crisis should confront carbon dioxide emissions decreases and further the progress of alternative energy sources. A cap and trade system provides the advantage of increasing boundaries on carbon dioxide emissions. A cap and trade system concerning carbon dioxide emissions

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may not function on a national and global level. A carbon tax would allow the market to explain the societal expenditures of carbon dioxide emissions, could be enacted and become useful almost forthwith, and could be successful in advance of any global treaty concerning greenhouse gas emissions. Thus, a cap and trade system is not categorized a tax and it is not clear about its consequence on energy prices. A carbon tax would be a more successful market-based answer to global climate change than a cap and trade system. Carbon tax would bring forth necessitated revenue to assist development of options to fossil fuels. (Avi-Yonah and Uhlmann, 2009) The emissions of greenhouse gases are mainly from high-income countries, whereas the negative consequences of climate change are largely in low-income countries. The marginal harm expenditure of carbon dioxide is the net present value of the increasing harm as a result of a small raise in carbon dioxide emissions. (Tol, 2010)

A cap-and-trade design may acquire enough involvement to get a climate-change decrease regime functional. Any cap-and-trade system should chart a route toward truly binding caps on all relevant emitters of GHGs. A global carbon tax is less politically viable than an emissions trading system. Some parties to any future climate agreement may successfully mediate global emissions boundaries that surpass their projected emissions. To be successful, any cap and trade regime necessitates a precise and swift ex post estimate of permit quality. A cap-and-trade regime may cause enough global involvement among outstanding emitters to bring about the likelihood of effectiveness, and must rely on relevant predispositions in democratic states to moderate climate change. Any cap-and-trade regime at the global level will experience constraints toward non-compliance. (Keohane and Raustiala, 2009) The additional effect of one ton of GHG on climate change is not influenced by where in the world it is emitted. Main energy companies are reneging on their public undertakings to invest in carbon-capture and renewable energy technologies. The rise in atmospheric CO₂ concentrations has sped up to the fastest pace ever reported. Determining what boundary must be put on global warming includes normative and political estimates about acceptable risks. Carbon dioxide emissions have to be cut down progressively, the stricter the stabilization target and the smaller the threat of severe warming. Global warming is a crucial indication of system failure. Putting a price on emissions does not promote significant investments in emissions-reducing technologies. Industrial bio-fuels generate more GHG emissions than ordinary fossil fuels if the full emissions expenditures of producing them are considered. (Storm, 2009)

Outstanding long-term decreases in emissions will be accomplished if most countries follow adequate emission reduction policies. The transmission process from a government's aim to CO₂ emissions decreases is through climate change policies and decisions. The connection between emissions and policy commitment is not direct, as

1. Emissions may increase notwithstanding a relevant climate change policy thanks to economic growth goals,
2. Climate change policy may not be significantly carried out because of the entire government ineffectiveness,
3. Some countries have several targets when they follow emission reduction policies,
4. There is a notable diversity of potential climate change moderation policies, and
5. First-rate policies have a long-run impact on emissions.

There is an obvious correspondence between countries' per capita income and the fostering of relevant climate change policies. Substantial occurrence of high-carbon industries may generate the effective

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