

## Evaluating Oman's Green Transition: A Dynamic Stochastic General Equilibrium Analysis of Climate Policy Effects

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**Abstract :** In this paper, we analyze the macroeconomic impacts of Oman's strategy to transition to a green economy by 2050. Our objective is to determine the most effective climate policy instrument to facilitate this transition. By utilizing a Dynamic Stochastic General Equilibrium (DSGE) model, we assess the effectiveness of three climate policy tools: a carbon tax, subsidies to green assets, and taxes on brown assets. Our results indicate that a combination of a carbon tax, along with differentiated taxes and subsidies on green and brown assets, proves to be the most effective policy in reducing emissions while maintaining macroeconomic stability. The findings of this study demonstrate the need for policymakers to balance the immediate goals of reducing emissions with the economic costs involved. Implementing a gradual transition strategy may be preferable as it allows for mitigating the negative economic impacts while facilitating the shift towards a green economy.

**Keywords :** green economy, carbon tax, DSGE model, climate policy, sustainable growth

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