

Modeling Climate and Economic Dynamics: Optimist vs. Pessimist Views

Implications for Policy Making

Harjoat S. Bhamra

Imperial College Business School

May 1, 2024

Agenda

- 1 Optimists' View
- 2 Pessimists' View
- 3 Dialogue with Policymakers

Optimists' View: The Case for Detailed Models

Assumption

A lack of detailed and realistic models of the climate and the economy is a major barrier to avoiding bad outcomes.

- **Understanding Uncertainty:** Better models lead to a better understanding of uncertainties in climate risks.
- **Improved Decision-Making:** This enhanced understanding informs better climate risk management.
- **Social Cost of Carbon:** More accurate estimates help in evaluating the true cost of carbon emissions.
- **Value of Actions:** Improved models support better valuations of mitigation and adaptation strategies.

Precautionary Principle

In the face of uncertainty, it is prudent to take decisive actions sooner rather than later.

Pessimists' View: Questioning the Assumption

Critical Question

Is a lack of detailed and realistic models really a barrier to avoiding bad outcomes?

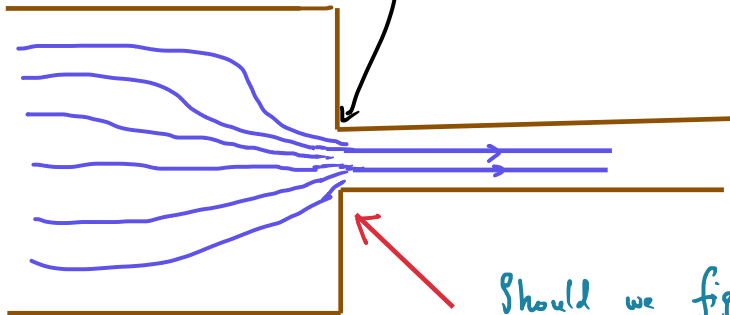
- **Complexity of Problems:** Is solving an optimal control problem with complex models truly impactful?
- **Political Barriers:** Often, the greater challenge is political will and organizational hurdles.
- **Policy Implementation:** The key issue may not be knowing what to do, but how to effectively implement policies.

Realistic Model Analysis

How do complex, realistic models address political and organizational barriers to action?

Are we facing a POLITICAL BOTTLENECK

political bottleneck



↑ Ideas on
what to do

Should we figure
out how to widen this?
OR

← have greater inflow of
ideas!

Communicating to Policymakers

- **Clear Communication:** Use models to present clear, actionable insights rather than complex data.
- **Focus on Solutions:** Emphasize practical steps that can be implemented, supported by model outcomes.
- **Build Consensus:** Engage stakeholders in understanding the models to foster agreement on actions.
- **Policy Flexibility:** Advocate for adaptive policies that can evolve with new data and models.

Conclusion

- Weighing the optimist and pessimist views, it becomes crucial to balance model precision with practical policymaking.
- The ultimate goal is effective action, guided by both detailed models and an understanding of political dynamics.