This paper makes an important contribution to the updating of SCC calculations, which are crucial in policy making.

Incorporates uncertainty of climate emissions, growth trends, and the marginal utility of income via stochastic discounting.

Impressive work part of a larger agenda.

**Bottom line**: Stochastic discounting puts more emphasis on the SCC during “bad” growth outcomes, which is intuitive.

- A similar argument applies to the cross section (internally to the US, or across countries).

- Good outcomes tend to have much higher SCC values, leading to a reduction in the SCC when the decreasing marginal utility of income is considered.
Some thoughts on this (to me) counter-intuitive finding

- I have to admit I was **initially surprised** by this finding: lower $E[SCC]$ when accounting for diminishing utility of income.

**Three thoughts:**

1. Uncorrected SCC is larger for better outcomes.
   - How to reconcile with observed failed adaptation outcomes for low-income individuals / countries to climate change? Climate beta?

2. Growth is uncorrelated with climate.
   - Low growth when climate outcomes are bad?

3. Growth is exponential, beliefs on growth are “linear”.
   - SCC grows exponentially due to underlying assumptions that compound but gets weighted in a centered way due to beliefs.
   - Any behavioral analogy to MPG illusion?
Expert elicitations on growth rates

- Beliefs about population, emissions paths, and growth are exogenously determined by expert beliefs.
- In an out-of-equilibrium trajectory for climate, it seems like an incredibly difficult thing to forecast.
  - E.g., covid-like events can be difficult to foresee.
- That said, difficult to provide objective quantifications for such a difficult completely out-of-sample exercise.
- This might be the best possible strategy, but maybe it can be improved (in the next iteration) and include damages.

- Would it be possible to expand and incorporate correlations?
- Or maybe just expert elicitation on the climate beta?
  - For the paper itself, could you provide results under different climate betas to qualify the main findings?
Bridging the target vs. SCC approaches

- Stark differences in **approach** to climate policy: Europe vs. US
  - EU: Explicit physical climate goals
  - USA: Focused on SCC at federal level

- Important differences in terms of **uncertainties**:
  - SCC: what are the marginal damages in \$/CO2?
  - Climate goals: what price in \$/CO2 will keep us within budget?

- Necessary to bridge the **two approaches** much more explicitly:
  - At $56/tCO2e, what physical abatement can be expected?
  - Is it (internally) consistent with the elicited paths of emissions?

- From a technological point of view, a $56/tCO2e tax, even if enforced, I conjecture is inconsistent with emissions path.
  - Important missing link, not an equilibrium outcome and thus becomes less useful for cost-benefit analysis if not adequately adjusted.
A critical feedback loop

- Climate policy is an important source of uncertainty.
- It seems critical to include it as part of the calculation.
- Climate policy in the US articulated via the SCC, critical in affecting the path of emissions and thus, damages.

The Result is part of the Process.