Comments on: GHG Emissions Control and Monetary Policy

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Relevant features of the model

- It addresses the optimal policy combination between monetary and environmental (fiscal) policies in a new-Keynesian framework characterized by:
  - nominal price rigidities with costly price adjustments
  - imperfect competition in the intermediate goods sector
  - negative externality of emissions on labor productivity
- Calibration and sensitivity analysis of parameters
- Pareto efficient equilibrium with flexible prices also discussed and compared

Most relevant results

- Strict inflation targeting is not the optimal monetary policy in the cases of a cap-and-trade environmental policy or a carbon tax policy in a setting with a severe damage by pollution.
- Main point: trade-off between the cost of adjusting prices and the cost of abating emissions

- Emissions are usually procyclical but may turn out to be countercyclical if the Ramsey planner controls only environmental policy and monetary policy is highly reactive.
- Main point: the opportunity cost of abatament reduces

Some questions and criticisms

- Could you provide some intuition why setting the emission target is equivalent to setting the carbon tax when the Ramsey planner controls both monetary and environmental policy?
- Does it matter with the pro-ciclicality of emissions in this case?

- Shortcoming of IAMs (Farmer et al. 2015, Pindyck 2015)
  - uncertainty about extreme climate outcomes
  - **distributional issues**
  - equilibrium
  - endogenous technological change and path dependencies
  - **financial and banking sectors matter**
  - …….

- Could IAMs or your model address some of the above issues in future research?

Are there valid alternative to traditional IMAs ?

- Agent-based macro-models with environmental features, e.g.
  - EURACE (Raberto et al., 2016, Ponta et al. 2016)
  - K+S (Lamperti et al. 2016)
- SFC sector-based models, e.g.
  - Dafermos et al. 2017
  - Jackson and Victor 2015
  - Godin et al 2016
- SD: GRO (Pasqualino et al. 2016)
- AB-SD: Eirin (Monasterolo and Raberto 2016)

Shortcomings: ad-hoc behavioral rules, too many variables/parameters, very difficult calibration