



C.I.R.E.D.

CENTRE
INTERNATIONAL
DE RECHERCHE
SUR L'ENVIRONNEMENT
ET LE DÉVELOPPEMENT

Climate policies and the « Asian Giants » *Insights from the Imaclim-R model*

**Jean-Charles Hourcade, Renaud Crassous, Olivier Sassi,
Frederic Gherzi, Sandrine Mathy, Vincent Gitz, Henri Weitzman**

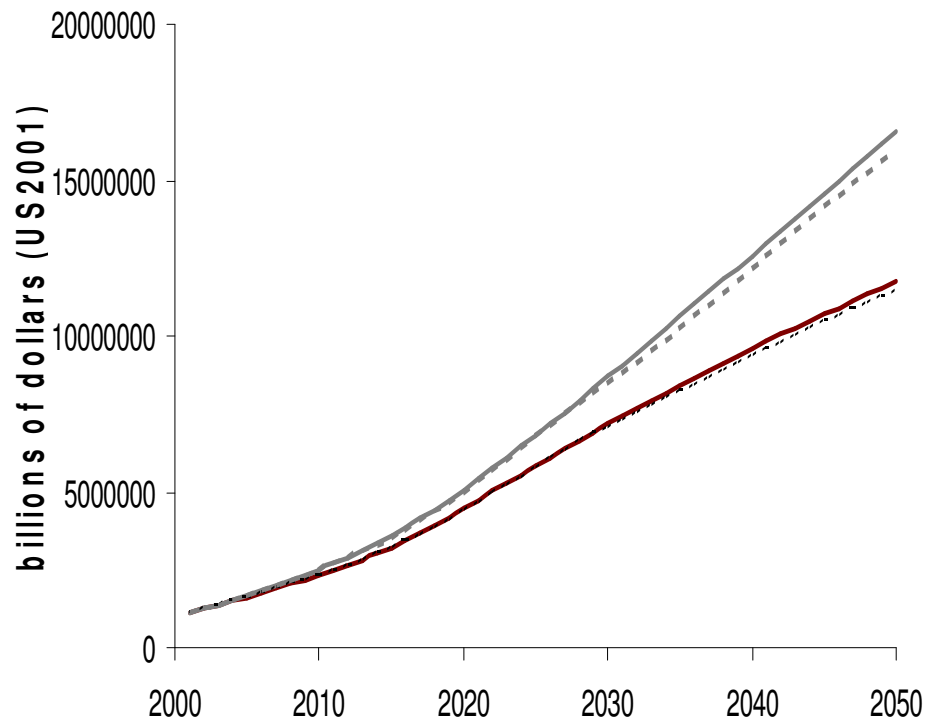
C.I.R.E.D. UNITÉ MIXTE DE RECHERCHE
EHES ET CNRS - UMR 8568
JARDIN TROPICAL
45 BIS AVENUE DE LA BELLE GABRIELLE
94736 NOGENT-SUR-MARNE CEDEX - FRANCE

The «Asian Giants » exercise: a specific order

- A report by the **Research Department of the World Bank** for the WB annual conference at Singapore
- Topic: the impact of the **Emerging Asian Giants (China, India)** on the World Economy (2005-2050),
- Chapter on energy and climate written by **Zmarak Shalizi** (senior economist, Economic Research Department)
- Energy scenarios provided by **Prof. Shukla** for India and **Dr. Keijung** for China
- Energy-economy baseline and policy scenarios run by **Imaclim**, integrating Chinese and India BU information and **in accordance with the WB's choices**

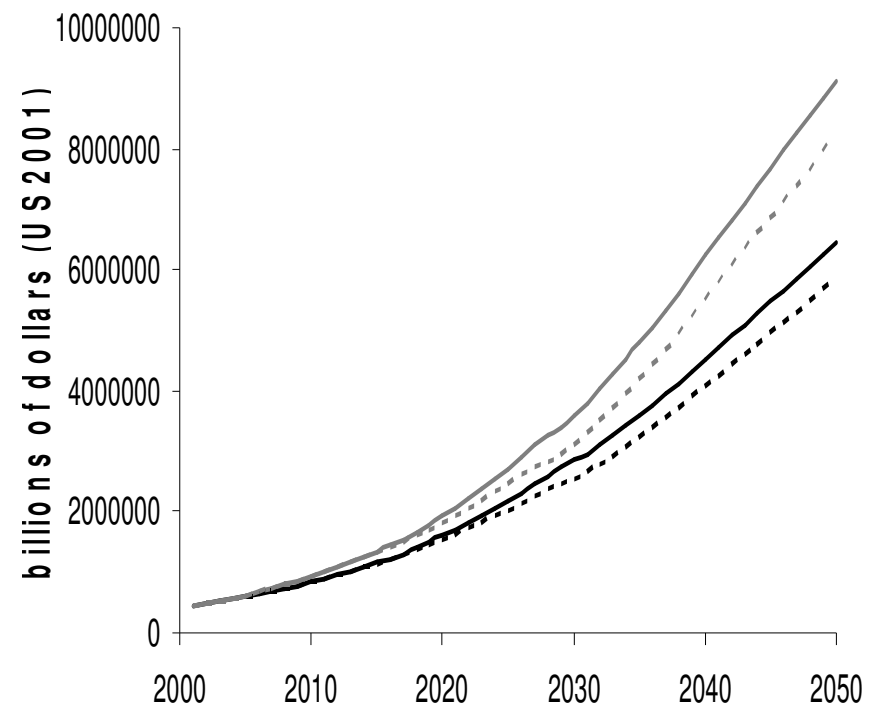
'Negotiated' growth baselines L&H, w/o & with frictions

Real GDP - China



— Low Growth — High Growth
..... Low Growth + energy frictions - - - High Growth + energy frictions

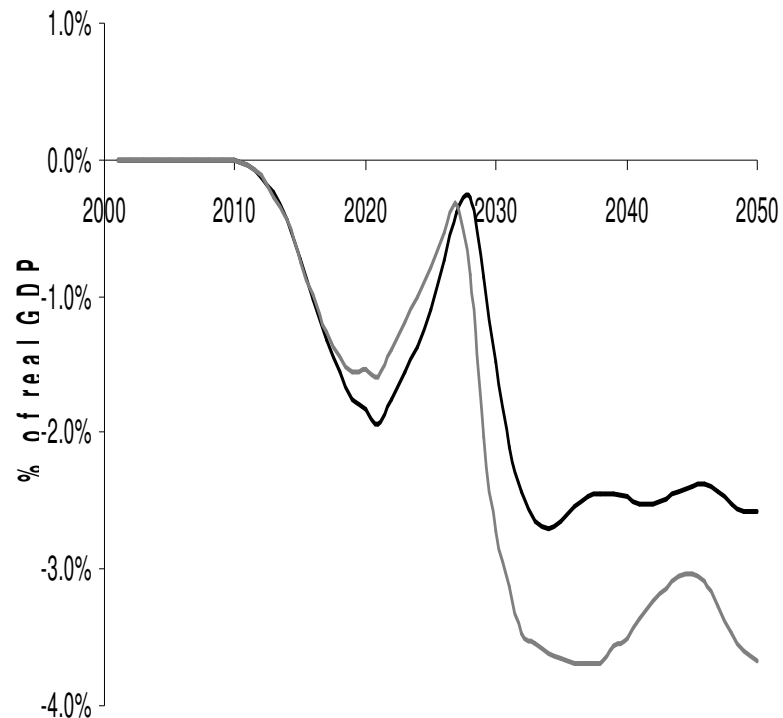
Real GDP - India



— Low Growth — High Growth
..... Low Growth + energy frictions - - - High Growth + energy frictions

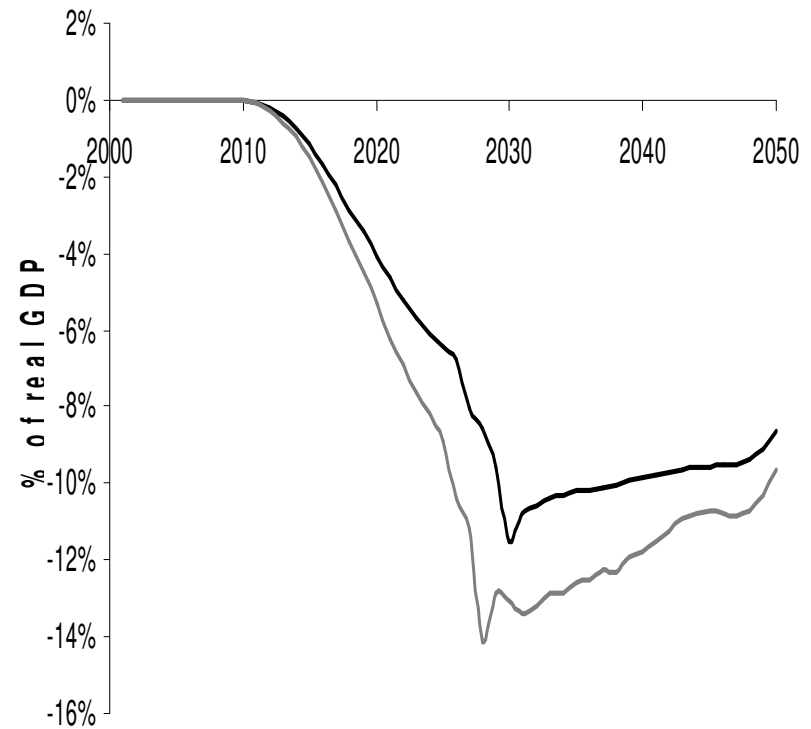
Beyond the regular growth curves: when singularities occur may be critical

Real GDP losses - China



— Low Growth + energy frictions
— High Growth + energy frictions

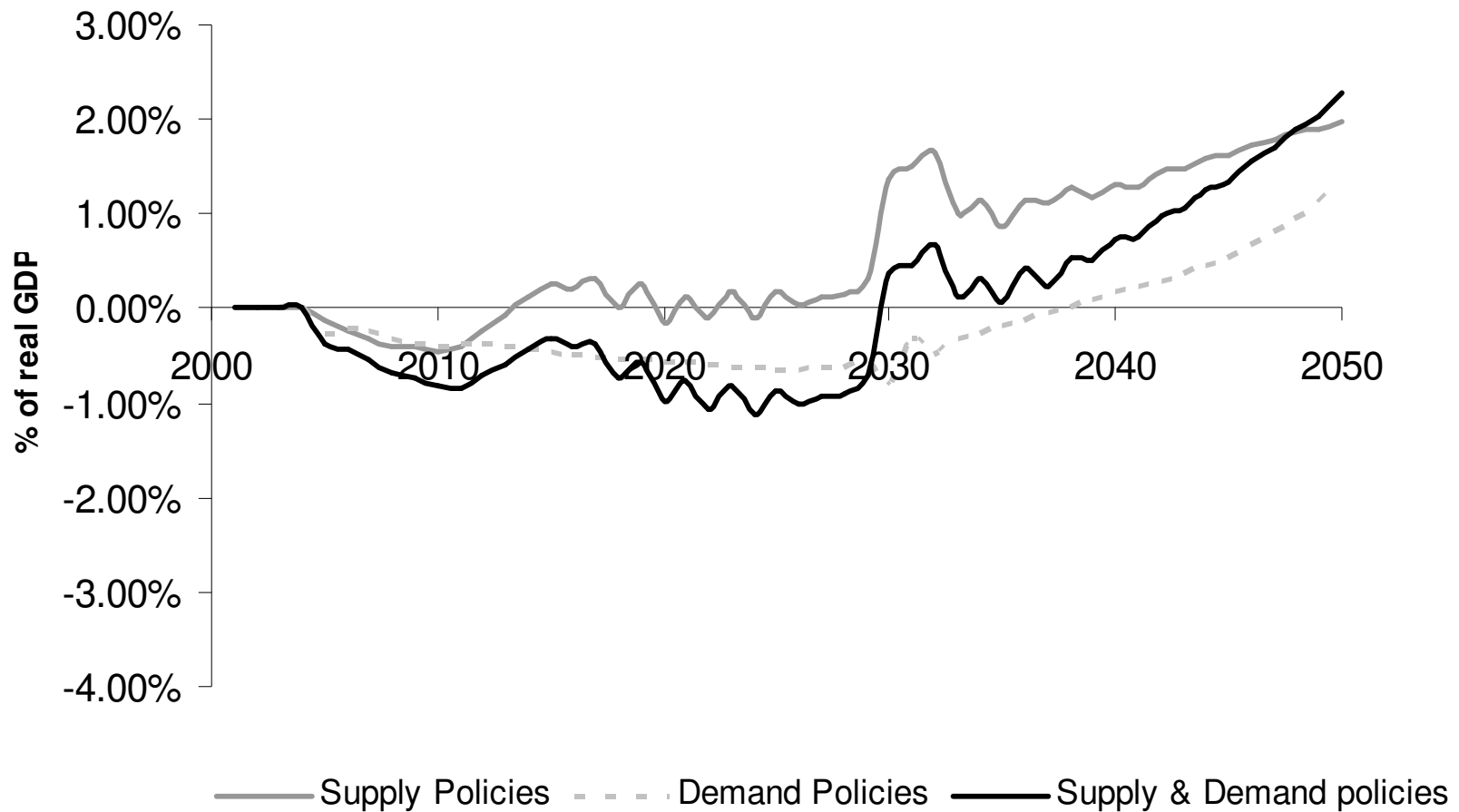
Real GDP losses - India



— Low Growth + energy frictions
— High Growth + energy frictions

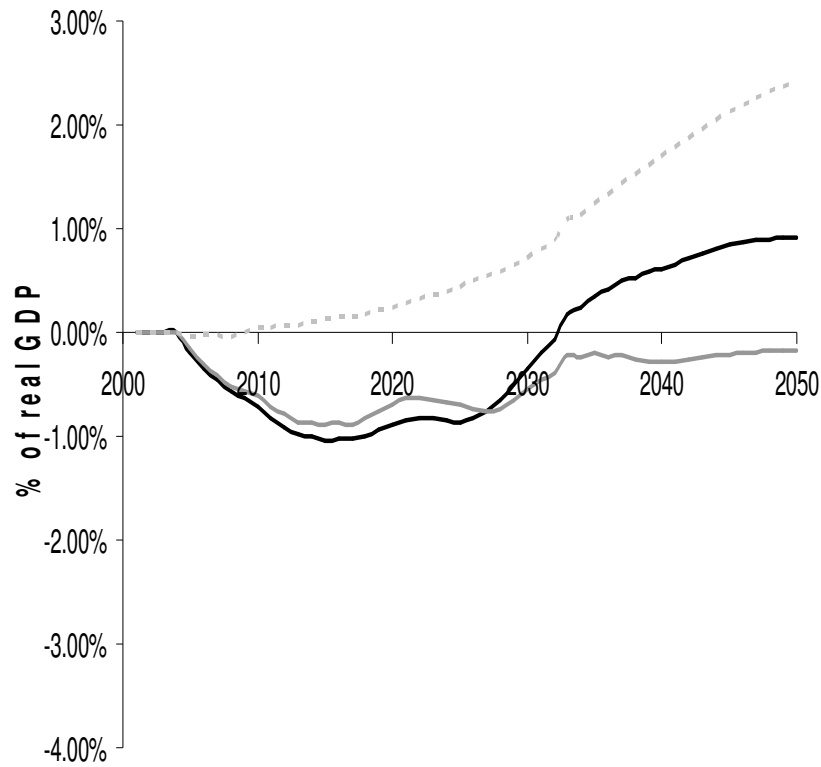
Net GDP variations due to the ALT-LG scenario in India

Real GDP losses w.r.t. CS scenario - India

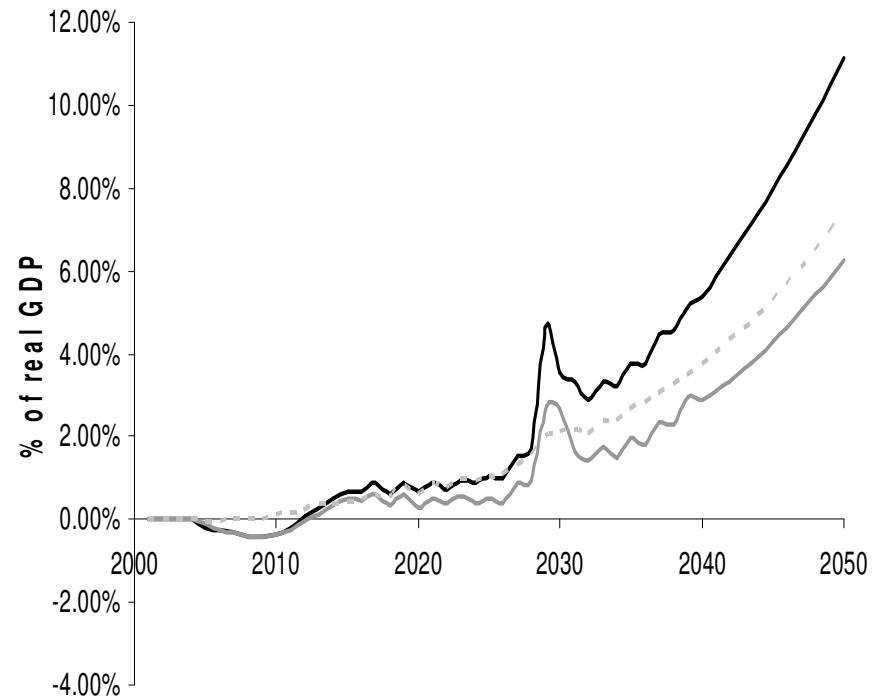


Rhetorical usefulness of overly politically correct assumptions?

Real GDP losses w.r.t. High Growth scenario - China



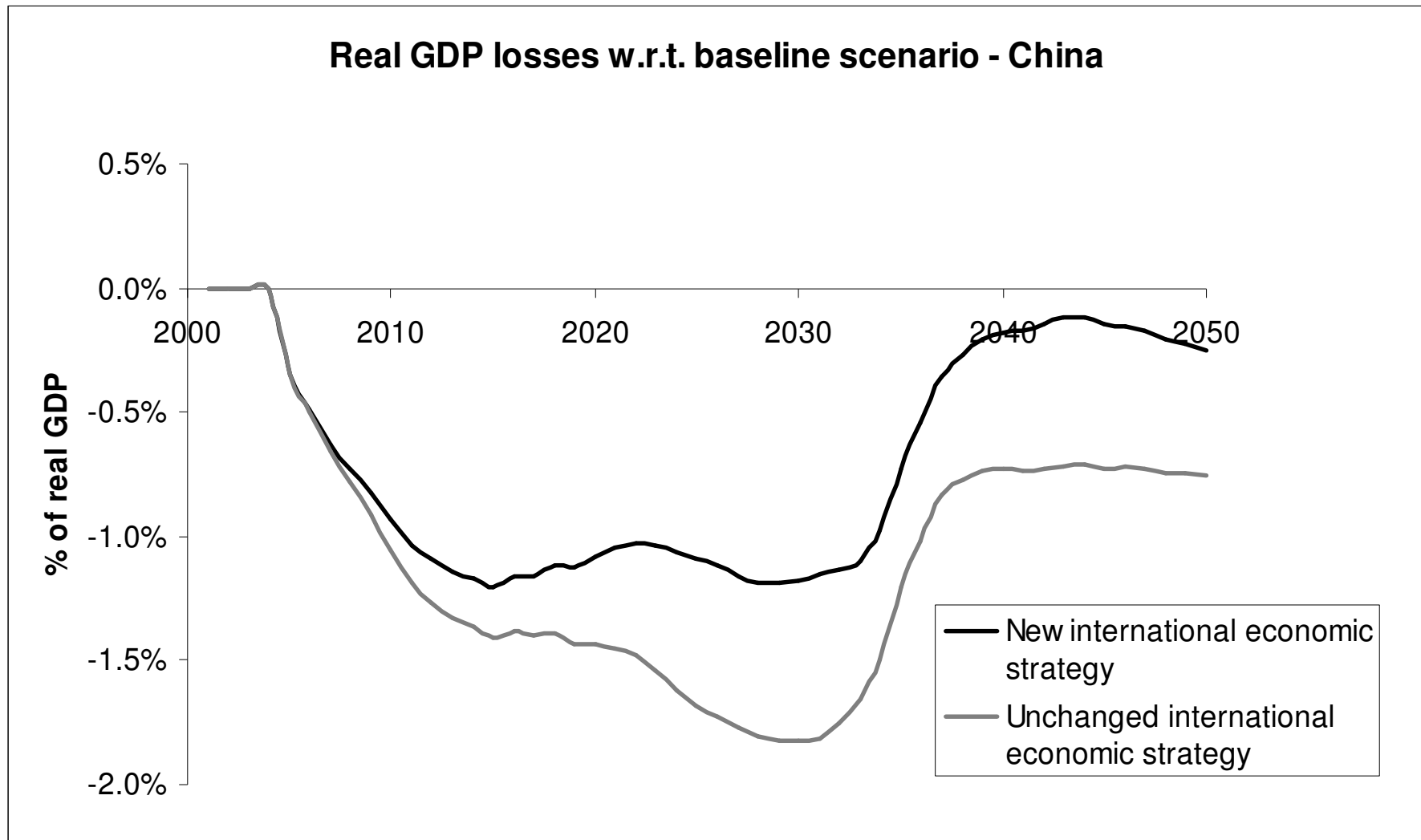
Real GDP losses w.r.t. High Growth scenario - India



— HG + SUPPLY + DEMAND — HG + SUPPLY - - - HG + DEMAND

— HG + SUPPLY + DEMAND — HG + SUPPLY - - - HG + DEMAND

How policy costs are dependant upon overall economic strategies



What “robust” policy insights?

1. The climate development **Gordian Knot can be untied** because climate policies contribute to slacken the energy tensions impinging upon the Asian Giants (including oil shocks)
2. **Transition costs** matter they are due to **additional capital costs** and to the **recessive effect of higher energy prices** (under coeteris paribus clausa)
3. **‘some’** international cooperation is needed, **now** but may be inhibited by an **unappropriate timing** due to the very emergence of the new Giants;
4. **International economic strategies matter** (monetary policy, level and structure of the ‘extraversion <-> wage policy): this offers a margin of freedom for negotiating future climate regime