Green growth and the climate negotiations

Climate Strategies
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Overview

• Green growth narrative identifies actions that are in countries self-interest

• Can this create a virtuous circle for the negotiations?
Green growth: The Keynesian story

In the short term green investment can help to kick-start a sluggish world economy (Green Fiscal Stimulus)

John Maynard Keynes

Source: Bowen and Fankhauser, Global Environmental Change, 2011
Green investment to boost aggregate demand?

High green capital needs at a time of low aggregate investment

Investment ratios (investment / GDP)

Source: Llewellyn Consulting
Green growth: The Pigouvian story

In the medium term green policies can help to overcome existing market failures that hold back growth (e.g. pollution)

Source: Bowen and Fankhauser, Global Environmental Change, 2011
Level of carbon tax justified by domestic benefits

(Brazil is already overtaxing certain fuels)

Source: IMF (Parry et al. 2014)
Green growth: The Schumpeterian story

In the long term green innovation may trigger a cycle of “creative destruction”, productivity improvements and growth.

Source: Bowen and Fankhauser, Global Environmental Change, 2011
The social benefit of green innovation

Green patents have higher benefits than dirty patents

• Clean patents are cited more often
• Clean patents have more general applications
• Clean-patent knowledge spillover is similar to IT patents
• Patterns hold over 4 technological fields
  – Energy production, automobiles, fuel and lighting

Source: Dechezleprêtre, Martin and Mohnen, Knowledge spillovers from clean and dirty technologies, Grantham Research Institute, 2013
Overview

• Green growth narrative identifies actions that are in countries self-interest

• Can this create a virtuous circle for the negotiations?
Countries are legislating on climate change

Survey of 66 countries found ca 500 climate or climate-related laws
Many laws are motivated by domestic factors (pollution, green growth)

Could there be a virtuous circle?

Climate change legislation is determined by laws passed elsewhere

<table>
<thead>
<tr>
<th>Variable</th>
<th>All countries</th>
<th>Annex 1 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer effect (stock of laws elsewhere)</td>
<td>0.159***</td>
<td>0.190***</td>
</tr>
<tr>
<td></td>
<td>(0.061)</td>
<td>(0.059)</td>
</tr>
<tr>
<td>Hosting a COP</td>
<td>0.680***</td>
<td>0.815*</td>
</tr>
<tr>
<td></td>
<td>(0.237)</td>
<td>(0.444)</td>
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<tr>
<td>Kyoto effect (laws 1997-2001)</td>
<td>-5.601*</td>
<td>4.673</td>
</tr>
<tr>
<td></td>
<td>(3.250)</td>
<td>(3.237)</td>
</tr>
<tr>
<td>Observations</td>
<td>1,383</td>
<td>418</td>
</tr>
</tbody>
</table>

Clipped standard errors at the country level in parentheses *** p<0.01, ** p<0.05, * p<0.1. All regressions include domestic control variables and country and time fixed effects.

Source: Fankhauser, Gennaioli and Collins, submitted
Conclusions

- Many carbon policies are in countries’ self-interest
- Countries are beginning to take action
- This in turn encourages action elsewhere
- Measures do not add up to 2°C, but might over time change negotiation dynamics