A Political Economy of Climate ‘Action’

David M Reiner, EPRG

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We’re getting closer to completing the energy transition

Meeting the world’s energy needs means ensuring universal access, mitigating climate change and cleaning up air pollution. Image: REUTERS/Ja

18 Jan 2018

Fatih Birol
Executive Director, International Energy Agency

This article is part of the World Economic Forum Annual Meeting
Some basic principles and harsh truths

• People don’t really seem to care about the environment (or at least not any more than they have ever done)
• If someone pays, it should be ‘industry’
• ‘Climate action’ covers a multitude of sins and countries as as likely to credit for rhetoric as actually reducing emissions (cf Germany v UK)
• There is no evidence that we have done anything at all to reduce emissions that is distinguishable from the counterfactual ca. 1990
• IPCC scenarios do not account for political economy considerations and although modelers have slightly improved the logic of their scenarios, they don’t seem to care (much) about history or inertia
People will always say they care

How important is protecting the environment to you personally? (% - EU)

- VERY IMPORTANT
  - Sept-Oct. 2017: 64
  - Apr.-May 2014: 53
  - Apr.-May 2011: 58
  - Nov.-Dec. 2007: 56

- FAIRLY IMPORTANT
  - Apr.-May 2014: 42
  - Apr.-May 2011: 37
  - Nov.-Dec. 2007: 32

- NOT VERY IMPORTANT
  - Sept-Oct. 2017: 4
  - Apr.-May 2014: 4
  - Apr.-May 2011: 4
  - Nov.-Dec. 2007: 3

- NOT AT ALL IMPORTANT
  - Sept-Oct. 2017: 1
  - Apr.-May 2014: 1
  - Apr.-May 2011: 1
  - Nov.-Dec. 2007: 1

- DON'T KNOW
  - Sept-Oct. 2017: 1
  - Apr.-May 2014: 1
  - Apr.-May 2011: 1
  - Nov.-Dec. 2007: 1

Base: all respondents (n=27,881)

Special Eurobarometer 468, Nov 2017
But environment is low on overall priority list

Most important issues facing the country (select up to three)
Few are convinced their own actions matter

Which statement best reflects your own situation in relation to your effort to take care of the environment:

Eurobarometer EBS 217 (2005)

www.eprg.group.cam.ac.uk
and most are only willing to do ‘easy’ things

- Sort waste so that it can be recycled: 72%
- Reduce your home energy consumption (electricity, heating, household appliances, etc.): 39%
- Reduce waste by buying bigger sizes, concentrated products, second hand items or avoid buying over packaged products, etc.: 32%
- Purchase ecologically friendly products for your daily needs even if you have to pay a little more for them: 31%
- Use public transport as much as possible instead of using your own car: 30%
- Consider environmental aspects when you make large expenditures (buying a car, heating systems, build a house, etc.): 24%
- Not have a car: 8%
- Pay a little more in taxes to help protect the environment: 5%
Climate is a top environmental priority

Top 4 most important environmental issues

- Climate Change: 51%
- Air Pollution: 46%
- Growing Amount of Waste: 40%
- Pollution of Rivers, Lakes and Ground Water: 36%

Base: all respondents (n=27,881)

Eurobarometer EBS 468 (2017)
But not everywhere…

Base: all respondents (n=27,881)

Most important environmental issue by member state

Eurobarometer EBS 468 (2017)
Underlying views are not changing (much)

How worried are you about global warming?

Yale and GMU (2017) Politics and Global Warming
Some notable partisan divisions (esp in USA)

- %who “strongly” or “somewhat support” -

<table>
<thead>
<tr>
<th>Category</th>
<th>0%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Reg Voters</td>
<td>70%</td>
<td></td>
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<td></td>
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<tr>
<td>Total Dem (n=459)</td>
<td>88%</td>
<td></td>
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<tr>
<td>Ind (n=120)</td>
<td>68%</td>
<td></td>
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<tr>
<td>Total Rep (n=442)</td>
<td>48%</td>
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<tr>
<td>Lib D (n=240)</td>
<td>91%</td>
<td></td>
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<tr>
<td>Mod/ Con D (n=219)</td>
<td>86%</td>
<td></td>
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<tr>
<td>Lib/ Mod R (n=127)</td>
<td>59%</td>
<td></td>
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<td></td>
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<tr>
<td>Con R (n=313)</td>
<td>43%</td>
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</tbody>
</table>

How much do you support or oppose the following policy? Require fossil fuel companies to pay a carbon tax and use the money to reduce other taxes (such as income tax) by an equal amount.

"Do you think the U.S. government is doing too much, too little, or about the right amount in terms of protecting the environment? (Gallup Poll, US n~1000)"

<table>
<thead>
<tr>
<th>Month</th>
<th>Too much</th>
<th>Too little</th>
<th>About right</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-18</td>
<td>9</td>
<td>62</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Mar-13</td>
<td>16</td>
<td>47</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>Mar-12</td>
<td>17</td>
<td>51</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>Mar-11</td>
<td>16</td>
<td>49</td>
<td>33</td>
<td>2</td>
</tr>
<tr>
<td>Mar-10</td>
<td>15</td>
<td>46</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>Mar-06</td>
<td>4</td>
<td>62</td>
<td>33</td>
<td>1</td>
</tr>
<tr>
<td>Mar-05</td>
<td>5</td>
<td>58</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>Mar-04</td>
<td>5</td>
<td>55</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>Mar-03</td>
<td>7</td>
<td>51</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>Apr-00</td>
<td>10</td>
<td>58</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>Feb-92</td>
<td>4</td>
<td>68</td>
<td>26</td>
<td>2</td>
</tr>
</tbody>
</table>
Strong preferences for R&D and action on industry

QD8 In your opinion, which of the following would be the most effective ways of tackling environmental problems? (MAX. 3 ANSWERS)

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investing in research and development to find technological solutions</td>
<td>35</td>
</tr>
<tr>
<td>Introducing heavier fines for breaches of environmental legislation</td>
<td>34</td>
</tr>
<tr>
<td>Ensuring better enforcement of legislation</td>
<td>31</td>
</tr>
<tr>
<td>Introducing stricter environmental legislation</td>
<td>30</td>
</tr>
<tr>
<td>Providing more information</td>
<td>28</td>
</tr>
<tr>
<td>Introducing or increasing financial incentives to businesses and people taking measures to protect the environment (e.g. tax breaks, subsidies)</td>
<td>27</td>
</tr>
<tr>
<td>Introducing or widening accessible training actions to help people change their habits (waste separation, transport habits, energy consumption, etc.)</td>
<td>26</td>
</tr>
<tr>
<td>Introducing or increasing taxation on environmentally harmful activities</td>
<td>22</td>
</tr>
<tr>
<td>Other (spontaneous)</td>
<td>1</td>
</tr>
<tr>
<td>None (spontaneous)</td>
<td>2</td>
</tr>
<tr>
<td>Don’t know</td>
<td>4</td>
</tr>
</tbody>
</table>

Base: all respondents (n=27,881)
Competing Views of ‘Success’

Note: Total emissions, excluding emissions covered by the Emissions Trading Scheme (ETS).

CAN Europe, Off target: Ranking of EU countries’ ambition and progress in fighting climate change, June 2018
Off target

Ranking of EU countries’ ambition and progress in fighting climate change
Where do EU countries stand on fighting climate change?
NGO view versus Atmosphere’s View

**EU CO2 emissions trends since 2014**

- **Source:** BP statistical review

**Portugal - 3rd**
- **65%** Overall performance on climate and energy indicators
- **42%** Progress on implementation 2020 targets
- **40%** Domestic targets additional to EU targets
- **78%** Support to increased ambition during negotiations on revised legislation
- **75%** Promotion of more ambitious EU targets and strategies

**Germany - 8th**
- **35%** Overall performance on climate and energy indicators
- **17%** Progress on implementation 2020 targets
- **40%** Domestic targets additional to EU targets
- **67%** Support to increased ambition during negotiations on revised legislation
- **50%** Promotion of more ambitious EU targets and strategies

**United Kingdom - 14th**
- **55%** Overall performance on climate and energy indicators
- **25%** Progress on implementation 2020 targets
- **40%** Domestic targets additional to EU targets
- **22%** Support to increased ambition during negotiations on revised legislation
- **25%** Promotion of more ambitious EU targets and strategies
The first of these scenarios [...] depicts a world in which few or no steps are taken to reduce emissions

So assuming +2 ppm/year  
2025  
~426 ppm
Historical Trends vs IPCC Scenarios

• Five new socio-economic pathways (SSPs) have been introduced by IPCC to try to reflect a slightly greater awareness of future pathways

• Much of the focus since the Paris Agreement have focused on the prospects for meeting a 1.5 °C target

• Increasingly historically disconnected exercises in trends:
  – CO2 emissions
  – Vegetarianism
  – Energy efficiency
  – Carbon pricing
  – Demand response

• There is a clear tension emerging between imaginary technologies and unimaginable changes in society
Examples of the dramatic changes envisioned
D. Guan et al (in press), Drivers of China’s CO$_2$ emissions 2007-2016, Nature Geoscience
Shared Socio-Economic Pathways (SSPs)

- Update on previous set of socio-economic scenarios (SRES, 2000)

  Seeks to set out more logically consistent scenarios (e.g., on air pollutants)

  Still, the mitigation scenarios don’t differentiate between plausibility of effort under different SSPs

  Highest pop growth
  Lowest GDP
  Trade wars, etc
Relationship between SSP and RCP

Example: Mitigation effort

Very low forcing scenarios to be developed
Evidence of SSP5?

Frontrunner stirs up voters in Mexico polls

Andrés Manuel López Obrador, the presidential frontrunner, was among the first to vote yesterday at a polling station in Mexico City, where he used to be mayor.

The anti-establishment candidate, who has galvanized voters furious with graft scandals and terrified by a record murder rate, had signalled his confidence by flashing a victory sign.

Mexicans look set to deliver an unequalled victory to the leftist nationalist— at least if polls prove correct.

With 10,229 federal, state and local posts being decided, including the presidency, these are the biggest elections in Mexican history. More than 100 candidates and politicians have been murdered during the campaign.

Trump car tariffs threaten to spark full-scale trade war, warns Brussels

President’s threat spreads EU alarm ● Trade partners target $300bn of US products
Energy and Carbon Intensity Improvements

Scenario type:
- Baseline
- 6.0 W/m²
- 4.5 W/m²
- 3.4 W/m²
- 2.6 W/m²

2°C scenarios

Riahi et al (2017)
Energy and Carbon Intensity Improvements

Riahi et al (2017)
Energy and Carbon Intensity Improvements

Scenario type:
- Baseline
- 6.0 W/m²
- 4.5 W/m²
- 3.4 W/m²
- 2.6 W/m²
- SSP1
- SSP2
- SSP3
- SSP4
- SSP5

Riahi et al (2017)
Energy and Carbon Intensity Improvements

Riahi et al (2017)

Scenario type:
- Baseline
- 6.0 W/m²
- 4.5 W/m²
- 3.4 W/m²
- 2.6 W/m²

History (1971-2010)

2°C scenarios

28
Energy and Carbon Intensity Improvements

Riahi et al (2017)
Actual changes in energy intensity

If improvement had been 2% over 1990-2015 then world energy intensity would be almost half current levels!

EIA (2016)
https://www.eia.gov/todayinenergy/detail.php?id=27032
Final Thoughts

• Climate action and the energy transition mean very different things to different people and is not simply a question of GHG trajectories

• In response to the diversity of pressures and the lack of accountability, politicians have behaved quite rationally

• There are, of course, many possible unknown unknowns or potential gamechangers but little evidence of abrupt change

• We will hopefully hold forces seeking to undermine the international order at bay, but that is hardly a given

• There is a deep-seated optimism that pervades most modeling efforts that underplays the magnitude of the challenges we face in achieving deep decarbonisation
Thanks!

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