

# Green growth and the climate negotiations

Climate Strategies  
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: vivid economics

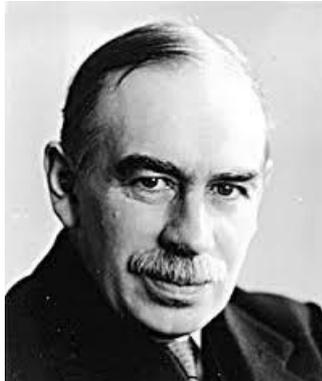


# Overview

- 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

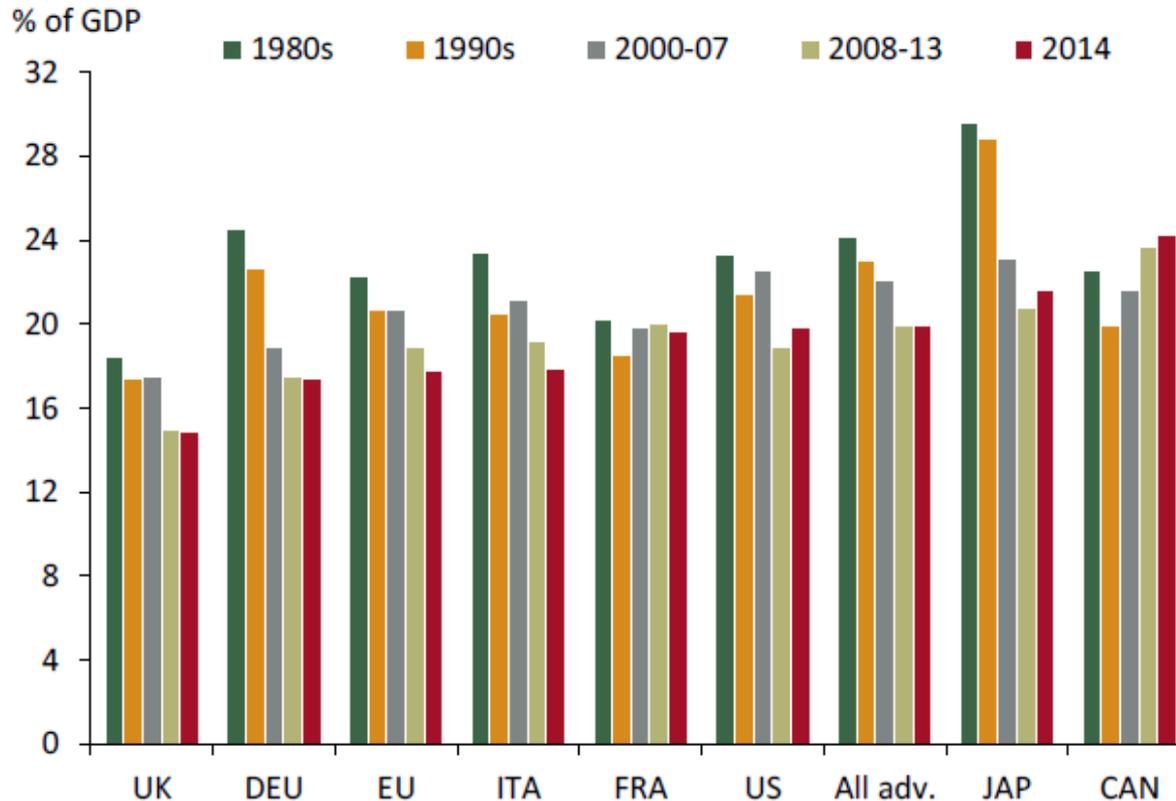
In the short term green investment can help to kick-start a sluggish world economy (Green Fiscal Stimulus)



John Maynard Keynes

# Green investment to boost aggregate demand?

High green capital needs at a time of low aggregate investment



Investment ratios (investment / GDP)

Source: Llewellyn Consulting



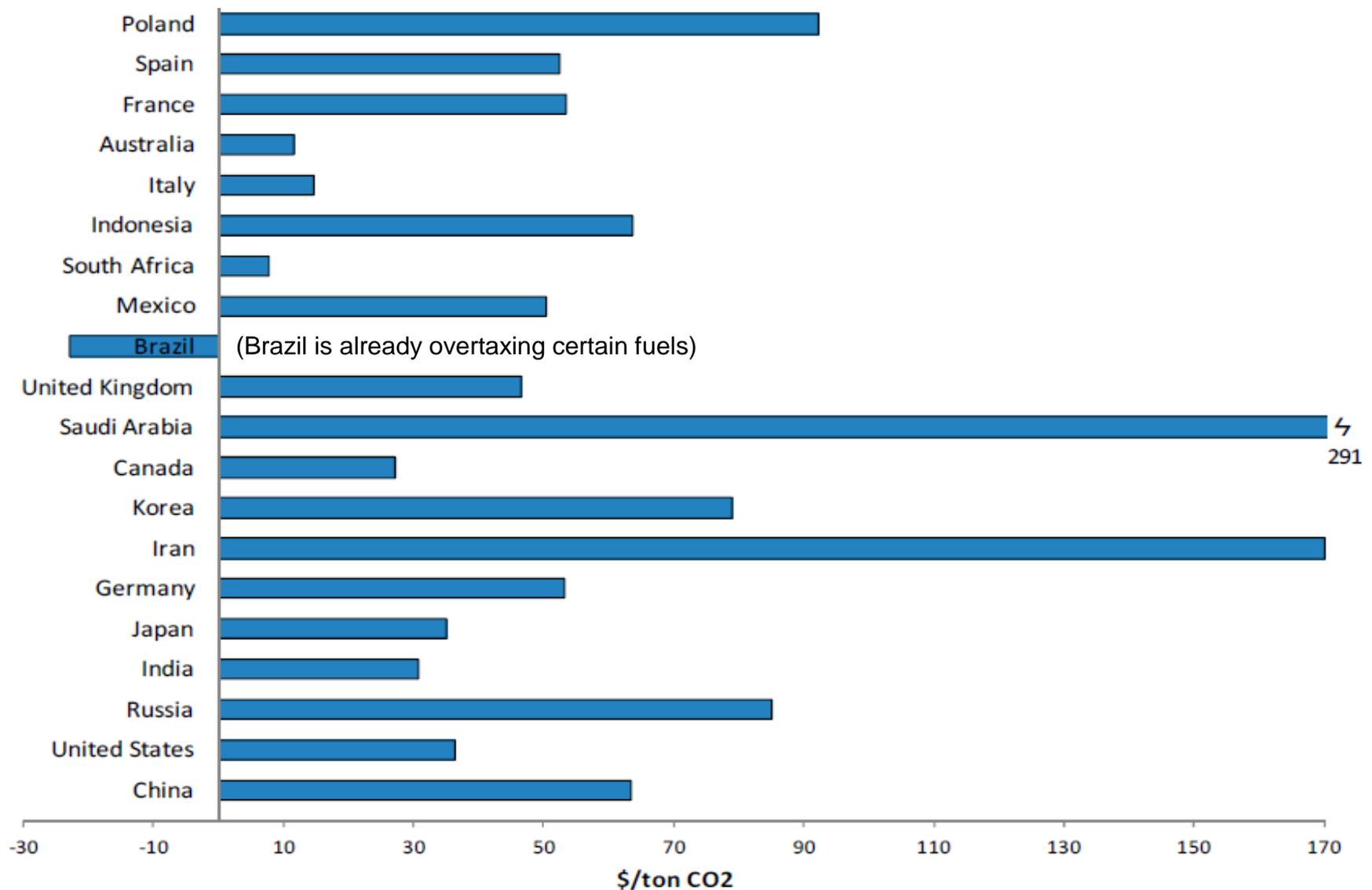
# Green growth: The Pigouvian story

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



Arthur Cecil Pigou

# Level of carbon tax justified by domestic benefits



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



Joseph Schumpeter

# 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

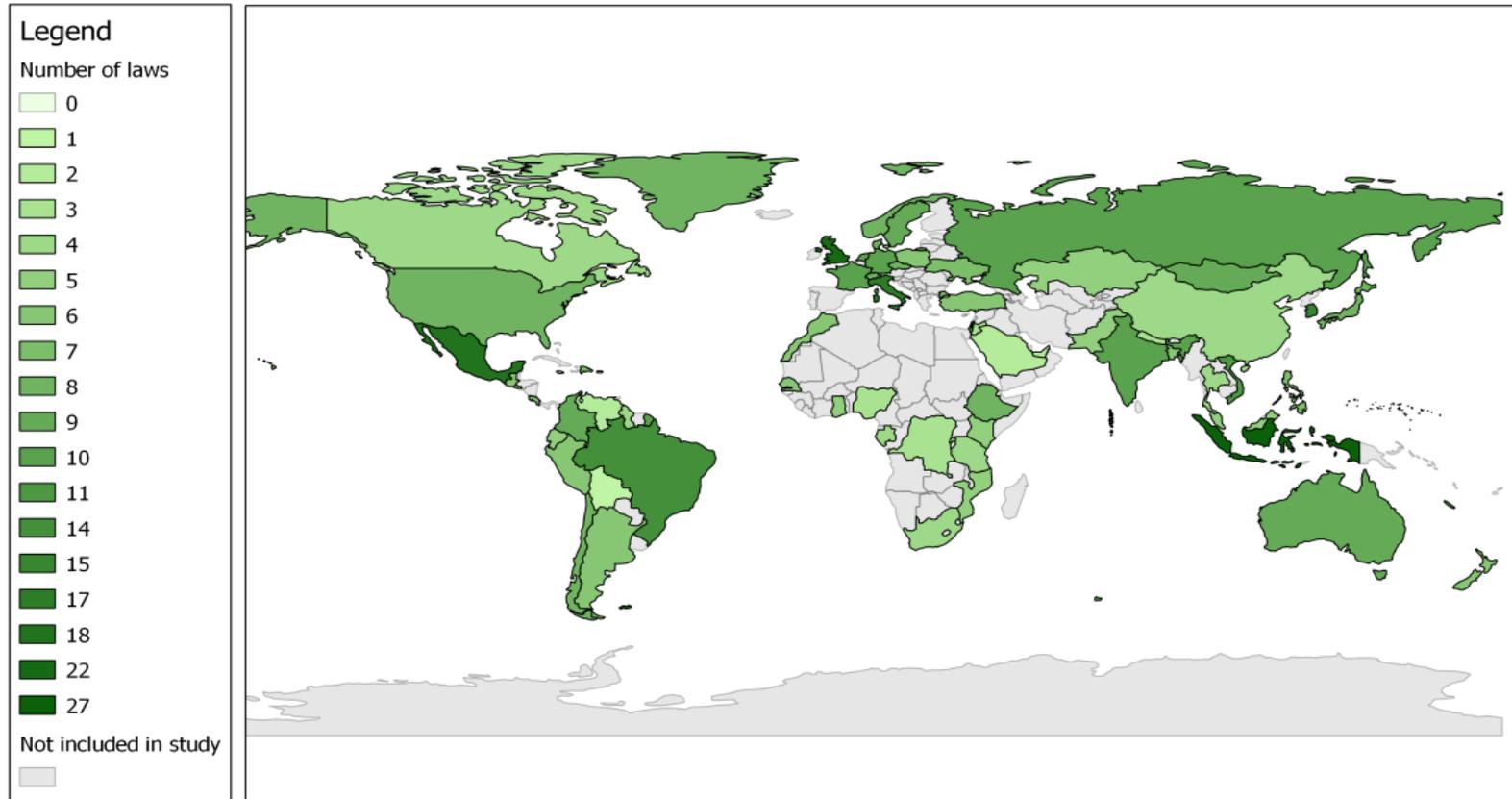
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# Countries are legislating on climate change

Survey of 66 countries found ca 500 climate or climate-related laws

Many laws are motivated by domestic factors (pollution, green growth)



Source: Nachmany, Fankhauser et al, The Globe Climate Legislation Study 2014

# Could there be a virtuous circle?

Climate change legislation is determined by laws passed elsewhere

Explaining the passage of climate laws		
<i>Variable</i>	<i>All countries</i>	<i>Annex 1 countries</i>
Peer effect (stock of laws elsewhere)	0.159*** (0.061)	0.190*** (0.059)
Hosting a COP	0.680*** (0.237)	0.815* (0.444)
Kyoto effect (laws 1997-2001)	-5.601* (3.250)	4.673 (3.237)
Observations	1,383	418

Clustered 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