



# **How can economists help to tackle climate change?**

**A “free market” perspective**

Julian Jessop  
Economics Fellow, IEA

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# 1. Agenda

- Why economics?
- The challenges of climate change
- How economists think about the environment
- Some dodgy claims made by others
- Suggested viewing
- Q&A

## 2. Why economics?

- Economics is about improving **people's welfare**
- Great for **all-rounders** (not just about maths or money!)
- Wide variety of career options: public sector, financial services, consultancies, 'think tanks', charities ...
- Lots of **practical applications**: economists have something to say about almost all the big issues of the day ...
- ... including climate change



### 3. What is 'climate change'?

- Period of **global warming**, associated with increased number of **extreme weather events**, rising sea levels, desertification and other natural disasters (e.g. wildfires).
- Climate change is **nothing new**. In the last 650,000 years there have been *seven* cycles of glacial advance and retreat.
- These were periods of **natural fluctuations** in temperature, mainly due to variations in Earth's orbit around the sun, other changes in solar output, or volcanic activity
- However, scientists now agree that the current episode of global warming is largely caused by **human activity**

## 4. How economists think about the environment

- If climate change is caused by human activity, how can we **change people's behaviour**?
- How much should the **government** intervene directly, for example by investing public money in 'green' infrastructure, or banning certain activities completely?
- Should responses to climate change be dictated by the government, or driven by decisions made by individual households and companies (or a mixture of both)?
- Free-market economists (myself included) prefer to put more emphasis on '**market-based solutions**'...

## 5. Pollution

- People's actions can impose unintended costs on others.
- For example, I drive my car to get from A to B. That might be all I care about. But in doing so, my car might pump out **greenhouse gases**, or cause **traffic congestion**.
- We could just ban cars. But they are useful.
- Instead, we need some way to make me take these additional costs into account, by adding them to the price of driving. This could be done by imposing an additional **tax** on fuel or carbon emissions, or congestion charging.
- Pollution is what economists call a '**negative externality**'. Taxes that correct for this are called '**Pigovian taxes**'.

## 6. Environmental subsidies

- There are also '*positive externalities*'. For example, people walking past can enjoy looking at the flowers in our garden
- Environmental land management schemes pay farmers to deliver environmental benefits, such as:
  - ✓ clean air and water
  - ✓ thriving plants and wildlife
  - ✓ enhanced landscapes
  - ✓ measures to minimise the impact of climate change



## 7. Flood defences

- It's not possible to exclude any particular individual from the benefits of improvements in **flood defences** in their area, even if they haven't paid for them ('free riders')
- This means private companies won't be able to charge everyone who benefits, and they won't make enough money to make the investment worthwhile
- In this case, the government could help by paying for flood defences out of general taxation. (This might also apply to some 'green' infrastructure projects.)
- Flood defences are an example of what economists call a '**public good**'. Another is **clean air**.

## 8. Changes in individual choices

- The government might 'know best', but why not just share that knowledge?
- With **better information**, consumers can make better choices – without the need for coercion
- Consumers and **investors** can also put pressure on the companies to change their behaviour
- Caveat: the world is still heavily dependent on fossil fuels (as we have seen in the last few weeks), so banning new investment in this sector may backfire

## 9. 'Net zero'

Reaching Net Zero by 2050 with investment in clean energy solutions and green infrastructure to reduce carbon emissions and pollution.

### Conservative Manifesto 2019

- 'Net zero': reducing greenhouse gas emissions and increasing the amount removed from the atmosphere, so that the UK's net emissions fall to zero
- This will be very costly (over £1 trillion). Do the additional benefits of net zero rather than, say, an 80% reduction, justify the additional costs? ('cost-benefit analysis')
- The UK accounts for <1% of global emissions, but could the UK set an example for other countries? ('game theory')

## 10. Climate change and inequality

- Claim: *“We have to have a more equal society. It’s the wealthy who are causing climate change; 70% of flights are taken by the richest 15% of people.”*
- *Tackling climate change means we have to address the desperately unequal way both wealth and power are distributed.”*
- Reality: there may be lots of better reasons to worry about **inequality**, but redistributing wealth or income could simply mean that more people can afford to fly!



# 11. Climate change and population

- Claim: “*Overpopulation is causing climate breakdown*”
- Reality: recall how **Thomas Malthus** was wrong about the ability of the planet to feed a growing population
- Similarly, modern-day pessimists are under-estimating the scope to support more people, grow economies and raise living standards without harming the planet.
- Europe already has a demographic problem – too *few* children. Future population growth will mainly come from developing countries, especially in Africa.



## 12. Climate change and companies

- Claim: *“Just 100 companies are responsible for more than 70% of the world’s greenhouse gas emissions since 1988”*
- Reality: it is true that fossil fuels have been the biggest source of CO<sub>2</sub> emissions and that this sector is dominated by a small(ish) number of large companies
- But these companies are simply responding to demand. It is *consumers who are ‘responsible’ for climate change*, not ‘evil corporations’
- Targeting these companies (e.g. with ‘direct action’) could be missing the point

## 13. Climate change and capitalism

- Claim: *“Ending climate change requires the end of capitalism”*
- Reality: simply **nationalising** a company would change nothing (pollution is at least as bad – probably worse – in socialist countries and planned economies)
- My personal view (many will disagree!) is that the best way to tackle climate change is by using **market mechanisms** and changing **individual behaviour...**
- ...both of which work best in capitalist economies, with freedom of choice

## 14. 'Buy local'

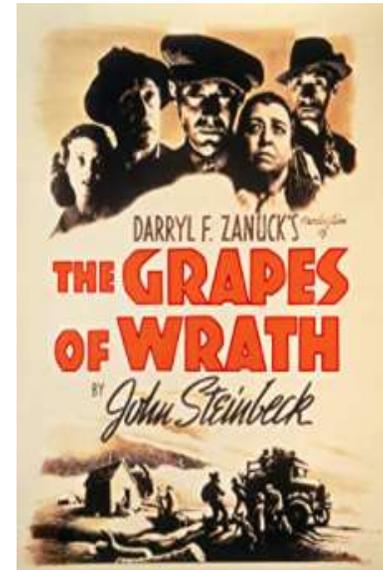
- Claim: *"Buying local is better for the planet"*
- Reality: the additional cost of transporting goods over long distances should already be reflected in the price (with additional taxes to tackle environmental externalities, if needed)
- The *overall* carbon footprint of imports - including costs of production - can still be lower (e.g. NZ lamb)
- Above all, **what** you eat matters far more than **where** the food comes from...



## 15. My conclusions

- Climate change is **real**, but that alone doesn't justify crashing the economy (or becoming off-grid hermits)
- Good economics is about recognising **trade-offs** and finding solutions that minimise environmental harms without making people a lot worse off
- This will sometimes require government intervention
- But a lot can also be done without coercion, including by providing **better information**, and through **market-based** solutions – such as making sure that **prices** reflect all costs, including impacts on the environment
- This is how economists can help!

## 16. Suggested viewing for anyone interested in economics...





# Any questions?

Julian Jessop

 @julianHjessop

[www.julianhjessop.com](http://www.julianhjessop.com)