



Sustainable Development



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Core lecture 4

Pollution

Study questions

1. Assume that the price of coal goes up steeply. What happens to the factor share of coal (i) in the short run, and (ii) in the long run?
2. Consider the following pollutants. How well can the simple EKC model explain what has happened, and predict the future? Would adding DTC improve the performance of the model? What else could be added?
 - (a) Sulphur to air in Europe.
 - (b) CFCs globally.
 - (c) Lead to air.
 - (d) Nitrates and phosphates to water.
 - (e) Neonicotinoids.
 - (f) CO₂ to air.
3. Are we heading for a cleaner future, globally?
4. Are subsidies to clean-energy research a good substitute for a price on carbon emissions? (Think about DTC!)
5. Look at Shapiro and Walker, AER (2018).^a Why is pollution from US manufacturing firms declining? Discuss links to our models.

^a<https://www.aeaweb.org/articles?id=10.1257/aer.20151272>.