

Growing green: how state-level banking deregulation helped reduce US industrial emissions

Maria Alsina-Pujols, ETH Zurich

Abstract

How does access to finance matter for the greening of our economies? This paper addresses this question by exploiting regional (county-level) variation in financial integration and environmental regulatory stringency generated by the interaction of two staggered natural experiments: U.S. state-level banking deregulation and the Clean Air Act. We document that banking deregulation is strongly associated with reductions in U.S. industrial emissions after 1990.

Tighter environmental standards require firms to adapt either by cleaning up their production processes (the intensive margin), or by closing down or reallocating their activity toward cleaner products or more lenient jurisdictions (the extensive margin). At the same time, access to finance can enable firms to clean up their production and allow households to smooth consumption, thus stabilizing local demand for non-tradable goods and enabling a swifter reallocation from polluting to less polluting industries.

Using emissions and employment data from local economies (at the facility and industry-county level) we show that financially more open areas saw a swifter reduction in emissions, mainly along the intensive margin. This happened because financially open places had a more elastic credit supply due to a stronger presence of banks with geographically diversified credit portfolios ("integrated banks").

Our analysis also suggests a reallocation of employment toward the services sector following tighter environmental regulation when access to finance is greater, as well as an increase in emissions-abating innovation. To address endogeneity, we implement different techniques, including the use of a granular measure of banking diversification, the implementation of a shift-share instrument, and matching differences in differences. Finally, a stylized two-sector model with credit expansion shocks, pollution, carbon taxes, and endogenous innovation rationalizes our empirical findings theoretically and numerically.