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

[Preliminary work—please do not circulate]

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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 the tightness of environmental regulation created by the interaction of two staggered natural experiments: US state-level banking deregulation and the Clean Air Act (CAA). We document that banking deregulation is strongly linked to the reduction of US industrial emissions after 1990. Tightening environmental standards require firms to adapt, either by cleaning up their production (the intensive margin) or by closing down or reallocating their activities to cleaner products or to more lenient jurisdictions (the extensive margin). At the same time, access to finance may enable new cleaner firms to start up and may also allow households to smooth consumption, thus stabilizing local demand for non-tradable goods, enabling a swifter reallocation from polluting to less polluting industries. We show using emissions and employment data from local economies (at the industry-county level), that financially more open local economies 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 potential reallocation of employment to the services sector as a result of tighter environmental policy and better access to finance, 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, as well as matching differences in differences. Finally, a stylized two-sector model with credit expansion shocks, pollution, carbon taxes, and endogenous innovation, rationalizes our empirical findings theroetically and quantitatively.

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