

INTERLINKED FIRMS AND THE CONSEQUENCES OF PIECEMEAL REGULATION

Christopher Hansman
Imperial College London

Jonas Hjort
Columbia University

Gianmarco León
Universitat Pompeu Fabra,
BGSE and IPEG

Abstract

Industrial regulations are typically designed with a particular policy objective and set of firms in mind. When input-output linkages connect firms across sectors, such “piecemeal” regulations may worsen externalities elsewhere in the economy. Using daily administrative and survey data, we show that in Peru’s industrial fishing sector, the world’s largest, air pollution from downstream (fishmeal) manufacturing plants caused 55,000 additional respiratory hospital admissions per year as a consequence of the introduction of individual property rights (over fish) upstream. The upstream regulatory change removed suppliers’ incentive to “race” for the resource and enabled market share to move from inefficient to efficient downstream firms. As a result, the reform spread downstream production out across time, as predicted by a conceptual framework of vertically connected sectors. We show evidence consistent with the hypothesis that longer periods of moderate air polluting production can be worse for health than concentrating a similar amount of production in shorter periods. Our findings demonstrate the risks of piecemeal regulatory design in interlinked economies. (JEL: D2, L5, O1, I1)

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E-mail: c.hansman@imperial.ac.uk (Hansman); hjort@columbia.edu (Hjort); gianmarco.leon@upf.edu (León)