East Side Story: Historical Pollution and Persistent Neighborhood Sorting

RÉSUMÉ

Why are the east sides of formerly industrial cities often the more deprived? Using individual-level census data together with newly created historical pollution patterns derived from the locations of 5,000 industrial chimneys and an atmospheric model, we show that this results from the persistence of neighborhood sorting that emerged during the Industrial Revolution when prevailing winds blew pollution eastwards. Past pollution explains up to 20% of the observed neighborhood segregation in 2011, even though coal pollution stopped in the 1970s. A quantitative model identifies the role of non-linearities and tipping-like dynamics underlying this persistence.