

# Is green technology skill biased?

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## Abstract

Technologies that limit greenhouse gas emissions have become a key component of modern technological change, but little is known about their impact on labour market inequality. This paper studies whether and when green technology increases the demand for workers with and without higher education. Green technologies differ from technologies previously shown to be skill biased because their main function is to improve clean relative to dirty production, rather than augment or replace types of labour.

Using linked employer-employee data and a novel shift-share instrument to account for endogenous technology choices, I show that the skill-bias of green technologies is highly heterogeneous. Specifically, I find that firms in manufacturing increase their share of high-skilled workers in response to an imported green technology shock, while firms in most other sectors (such as construction) decrease their skill ratio.

The political feasibility of climate policies depends on the winners and losers of the green transition. My results imply that the green transition is not inherently skill-biased -- instead, the labour demand and income inequality effects of green technologies vary significantly depending on the sector where the green transition occurs.