

Land purchases and afforestation - stopping two gaps with one forest: Stabilising the economy and fixing the climate problem during the green transition

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Abstract

While the economy transitions to climate friendly growth, is land purchases and afforestation an efficient stabilising solution for the economy and the climate? We compare two policies. In the first scheme, the government buys land for 10 years after which they spend the revenue from green taxes on the cheapest possible abatement. In the counterfactual scheme, the government buys abatement in all periods. To make this comparison we extend a detailed in a detailed dynamic partial equilibrium model of agriculture whit land use, land use change, and forestry. Over a 30 year period, afforestation policy generates a 5 times larger decline in emissions than investments in general abatement. At the same time, the policy stabilises land prices which decline with around 50% in the counterfactual scenario. As the forests mature and stop growing, emissions reverses back to similar levels in the two schemes. Even with large land buys, the scheme is economically feasible -people still eat. Our analysis show that afforestation policy is effective in the short and medium run while the world adjusts to lower greenhouse gas emissions.

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