

Green technologies, complementarities, and policy

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The present study explores the technological complementarities between green and nongreen inventions. First, we look at whether inventive activities in climate-friendly domains depend on patenting in related technological domains that are not green. Based on patent data filed over the 1978–2014 period, we estimate a spatial autoregressive model using co-occurrence matrices to capture technological interdependencies. Our first finding highlights that the development of green technologies strongly relies on advances in other green and in particular non-green technological domains, whose relevance for the green economy is usually neglected. Building on this insight, we detect the non-green complementary technologies that co-occur with green ones and assess whether environmental policies affect this particular instantiation of technologies at the country level. The results of the instrumental variable approach confirm that while environmental policies spur green patenting, they do not displace the development of the non-green technological pillars upon which green inventions develop.