

# Are policies enough on their own? On energy transition and renewable technologies in 17 European countries

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Renewable technologies (RTs) are crucial to solve environmental challenges. Are policies enough on their own to boost RTs? While it is undisputed that policies play a key role, they need support: a well-functioning R&D system, high level of attention to environmental issues, and awareness and preparation to understand the effects of climate change. We employ a panel vector autoregressive model in first differences to explain the export of solar and wind energy technologies (RET) based on renewable energy production as proxy for environmental policy (EPO) and three socio-technical variables in line with the literature on the energy transition: patents on environment technologies (PAT), public awareness measured as carbon dioxide emissions per capita (AWA), and education (EDU). At the same time, we control for countries' industrial wealth and technological modernity (GDP) and knowledge exchange in the opening to foreign trade (TRD). Results from 17 European countries show that more EPO, GDP growth, raising AWA, and more R&D stimulate the export of RTs, while higher levels of EDU and TRD seem to hamper RET. Moreover, we appreciate some reciprocal effects between variables, such as those between RET and PAT, and EPO and PAT.