

MARKET-BASED POLICIES, CITIZEN ATTITUDES AND EDUCATION POSITIVELY AFFECT GREEN ENERGY INNOVATION ACCEPTANCE IN IRELAND AND EUROPE

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OVERVIEW

The social acceptability of green energy innovations and policies has become increasingly important to policy-makers in Ireland and abroad. Renewable and sustainable energy projects often face difficulty gaining public acceptance and environmental taxes have been slow to rise at least in part because they face public opposition. It is yet not fully understood what factors determine households' willingness to accept such green energy-enabling innovations; this hinders efforts to decarbonize the energy sector and tackle climate change.

This research provides the first large-scale and comprehensive international examination of factors that potentially influence households' decisions to: i) support government plans to increase renewable energy and implement environmental tax measures, and ii) adopt green energy technologies (such as residential solar panels and electric vehicles). Key factors that are examined include households' social class and education levels, their attitudes about environmental and socio-political issues, as well as the current energy policies that are implemented within their countries.

METHODS

The empirical analysis was based on a novel dataset containing information on energy-related policies, technology adoption trends and citizen attitudes from 28 European countries including Ireland and the United Kingdom. In total, approximately 52,000 data points from the Eurostat, Eurobarometer and Odyssee-Mure databases were collected and analysed. Econometric and behavioural models were employed to decipher the relationships between the various parameters.

¹ This Bulletin summarizes the findings from: Spandagos, C., Tovar Reaños, M. A. and Lynch, M. Á. (2022), "Public acceptance of sustainable energy innovations in the European Union: A multidimensional comparative framework for national policy", *Journal of Cleaner Production*, 340, 130721. Available online: <https://doi.org/10.1016/j.jclepro.2022.130721>. The research is supported by the Sustainable Energy Authority of Ireland (SEAI).

RESULTS

We find that citizens who had completed tertiary education or who believe climate change is a serious problem were more likely to support environmental taxation, as were citizens who believe social class inequalities are serious in their country. There were also differences in support for environmental action across the social class dimension.

We also examined trends regarding technology adaptation. In general, citizens who completed tertiary education or believed climate change to be a serious problem were more likely to own residential solar panels and electric vehicles (as well as support taxation, as noted above), while European countries with higher household environmental taxes and energy prices per capita were found to have higher adoption rates of these technologies. These trends, however, varied more from country to country, compared to the results regarding support for environmental taxation.

POLICY IMPLICATIONS

A number of policy implications arise from this research. On the one hand, this work provides a new rationale for investment in education, that of improving the acceptability of green innovations. It also suggests that targeted measures will be needed to gain buy-in to the energy decarbonization transition for particular household groups across a social class dimension. Furthermore, this work bolsters the case for market-based environmental policies (such as green taxation and energy prices) as instruments to facilitate the sustainable energy transition, as they may be motivating citizens to seek low-carbon solutions, such as residential solar panels and electric vehicles, to their energy and transportation needs. Green taxation, in particular, may be a market-based policy that becomes more widely accepted if accompanied with transparent, inequality-reducing policy measures to protect households from the cost of transition. Future public support for such taxation may be strengthened to some extent by common, Europe-wide strategies, while future policies aiming to strengthen the adoption of electric vehicles and solar panels may be required to be more country-specific.

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