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The Role of Manufacturing Materials and Autonomous Driving in Preferences for Cars

A Cross-Country Comparison

The aim of this study was to examine the extent at which prospective car buyers valued the sustainability of materials resourced to make them. Using a choice experiment across Germany, India, Japan, Sweden, the UK, and the US, we found that economic and functional attributes dominated car choices.

Respondents placed relatively little or no value on ethically- or sustainably- sourced materials whereas non-conventional (organic) materials were important only in some countries. The overall low average scores of self-reported knowledge and salience about the sustainability of vehicles and phones were partially consistent with this relatively limited influence of the sustainable materials on product preferences. Findings showed considerable cross-national differences in consumer knowledge, preferences, and willingness to pay.

Secondly, further analysis of the choice-experiment data focused on how consumers responded to different levels of autonomous driving across the aforementioned six countries. Using Latent Class Discrete Choice Models, we observed significant heterogeneity both within and across the country samples. We also found that support for autonomous vehicles is associated with support for cleaner cars, perhaps, due to common demographic or socio-psychological predictors of both types of innovative technology.



Dr **Dimitris Potoglou** is a Reader in the School of Geography and Planning and programme director of the MSc Transport and Planning at Cardiff University. Dimitris' research interests span transport analysis and travel behaviour, interactions between travel behaviour and the built environment and car ownership.

His recent research work focuses on decarbonising transport through electrification with projects focusing on preferences for cleaner cars, business models for electric mobility and electric vehicle charging. In parallel, he is engaged in interdisciplinary projects at the intersection of preference elicitation methods and areas critical to public policy and decision making such as privacy and sharing of personal information. A current project, for example, looks at preferences for devices regulating ambient conditions in buildings.

Prior to joining Cardiff University, Dimitris worked as a policy-research analyst at RAND Europe – the European arm of the RAND Corporation – a policy-research institute based in Cambridge, UK.

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