



Social Effects in the Diffusion of Solar Photovoltaic Technology in the UK

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Abstract The main research question in this paper is whether the installation rate of solar PV technology is affected by social spillovers from spatially close households. The installed base, defined as the cumulative number of solar PV installations within a neighbourhood by the end of a particular month, serves as a measure for the social effects of interest. Motivated by the technology-specific time lag between the decision to adopt a solar PV panel and the completion of the installation, the third lag of the installed base serves as main regressor of interest in the panel data model employed. The results suggest small, but positive and significant social effects that can be exploited to promote adoption: at the average installation rate of 0.7 installations per 1,000 owner-occupied households, one more solar PV panel in the postcode district increases the installation rate three months later by one percent. At the average number of 6,629 owner-occupied households within a postcode district, this implies an increase in the number of new installations in the neighbourhood by 0.05. Projects involving a high number of installations could hence promote diffusion. A major limitation of the model is that social spillovers are assumed to spread within defined neighbourhoods, only. Spatial econometric methods could allow for social effects across these borders.

Keywords social effects, installed base, product adoption, diffusion, solar PV technology, micro-generation

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