

Relationships between hotel and restaurant electricity consumption and tourism in 11 European Union countries

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Tourism is a major economic activity in the world. However, while tourism has a noticeable positive impact on economic development, it also contributes to environmental degradation by increasing energy consumption and therefore emissions. This paper analyzes the relationships between Hotel and Restaurant electricity consumption and tourism growth in 11 European Union countries for the period 2005-2012, for which there is sufficient data availability. Panel data techniques are used to test an electricity consumption function for this sector, which depends on tourism, its squared value, energy price, income and a climate variable. The results show that the Energy-Tourism Kuznets Curve hypothesis is not supported. Instead, an increasing relationship is observed between the Hotel and Restaurant sector electricity consumption and overnight stays. Results also show the effects of income and low temperatures in increasing electricity consumption, while prices have no effects. Energy efficiency measures and the adoption of renewable energy systems are recommended, with further investments therefore being necessary. © 2017 by the authors.

Electricity consumption

European countries

Hotel and Restaurant sector

Panel data

Tourism growth

economic activity

economic development

electricity

energy efficiency

energy market

energy use

environmental degradation

environmental economics

European Union

investment

Kuznets curve

panel data

public sector

renewable resource

tourism

tourism development

Europe