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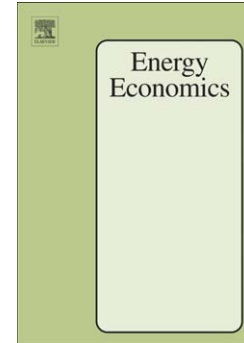
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Seungmoon Choi, Alistair Pellen, Virginie Masson

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How Does Daylight Saving Time Affect Electricity Demand? An Answer Using Aggregate Data from a Natural Experiment in Western Australia

Seungmoon Choi*, Alistair Pellen† and Virginie Masson†

*School of Economics, University of Seoul

†School of Economics, University of Adelaide

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Abstract

Daylight saving time (DST) affects the lives of more than 1.6 billion people worldwide, with energy saving being the original rationale for its implementation. This study takes advantage of natural experiment data from September 2006 to March 2013 in Western Australia in which DST was observed from December 2006 to March 2009, to estimate the effect of DST on electricity demand. Using the difference-in-differences (DD) approach, we find that DST has little effect on overall electricity demand and electricity generation costs. However, it has a strong redistributive effect by reducing electricity demand substantially in the late afternoon and early evening. This redistributive effect of DST may be of particular interest for policymakers who are interested in controlling high demand and the short term energy market price.

Keywords: Daylight Saving Time, Electricity Demand, Electricity Generation Costs

JEL codes: Q4, Q41, Q48

*Corresponding author: Seungmoon Choi, School of Economics, University of Seoul, 163 Siripdaero, Dongdaemun-gu, Seoul, South Korea, Email: schoi22@uos.ac.kr. Alistair Pellen, School of Economics, University of Adelaide, SA, Australia, Email: alistair_pellen@hotmail.com. Virginie Masson, School of Economics, University of Adelaide, SA, Australia, Email: virginie.masson@adelaide.edu.au. We are very thankful to the Editor, Richard S. J. Tol and three anonymous reviewers for constructive and helpful comments and suggestions. We also appreciate seminar participants for valuable discussions at the 2015 Korea International Economic Association Annual Meeting, the 2016 Korean Econometric Society Meeting and the 58th National Australian Agricultural and Resource Economics Society Conference in 2014. This work was supported by the 2016 Research Fund of the University of Seoul.

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