



BEHAVIOURAL ECONOMICS IN ENERGY AND ENVIRONMENTAL POLICY

IEA roundtable on *Choices, Decisions and Lifestyles*
Roundtable Draft Agenda

March 13, 2013
Paris



What is behavioural economics?

- Explains breakdowns of standard theory:
 - **Why does consumer behaviour** imply unbelievably high discount rates in the context of energy efficiency investments?
 - **Would you accept money** to compensate you for time spent volunteering at a homeless shelter?
 - **If you had a choice** between losing €100 for sure, or taking a gamble with equal odds of losing €25 or €175, which would you choose?



What can behavioural econ do for us?

- Devise new tools:

The screenshot shows the homepage of the stickK website. At the top, there is a navigation bar with links: Home, How it works, About stickK, Contact Us, and FAQ. The stickK logo is prominently displayed, followed by the tagline "The smartest way to set and achieve your goals". Below this, there is a featured commitment section. It includes a "featured" label, a link to "create your own", and a large orange button that says "start Now!". The main commitment text reads "I commit to" followed by a text box containing "Become a navy SEAL". Below the commitment text, there is a list of goals: "Be on time, study hard, lose weight, no more debt, more time with family, better sleep schedule, eat better, go back to the gym, help others, go jogging, learn something new...". The background of the page features a collage of images, including a woman working on a laptop, a calendar, and various fruits.



What can behavioural econ do for us?

- Understand(and avoid?) unintended consequences from price-based policies

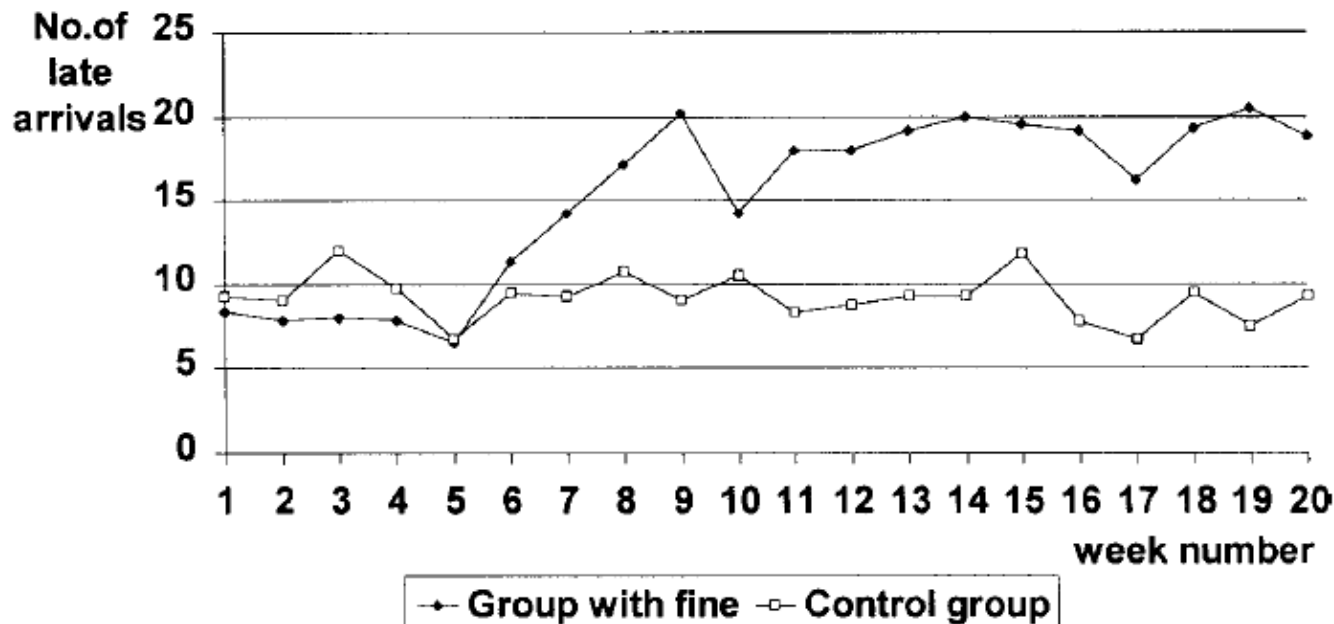


FIGURE I
Average Number of Late-Arriving Parents Each Week, by Group Type



Related work in OECD\ENV

- Greening Household Behaviour survey
 - 2008 & 2011 rounds completed.
- **B**ehavioural **E**con in **E**nvironmental **P**olicy
 - **In-house “experiment”** with OECD thermostat default settings.
 - **Catalogue of examples** where behavioural economics has been applied in design of env. Policies. *Completed by June 2013.*
 - Ongoing aim: **In-country field trials.**



Greening Household Behaviour

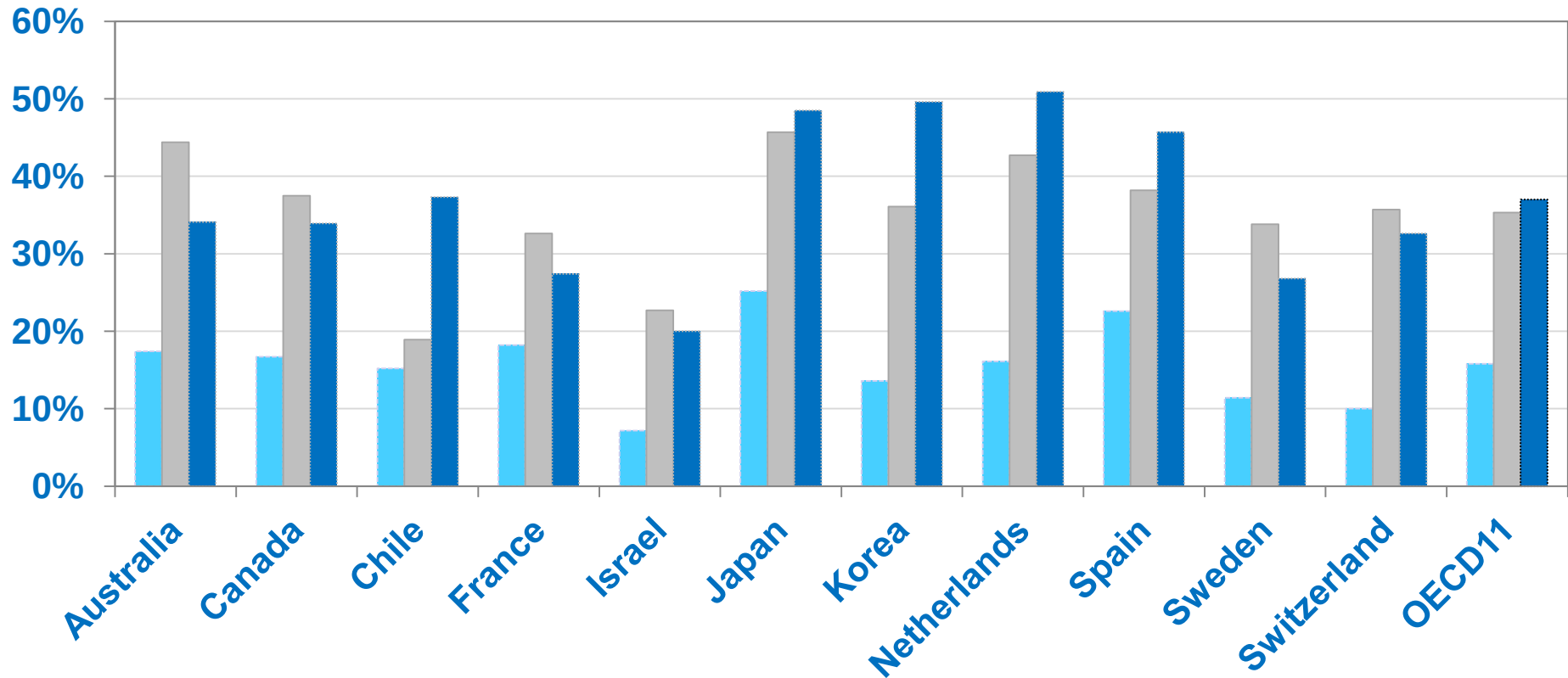
- **Objective:** Generate evidence-based guidance on what really works to change household behaviour
- **How:** Series of 3 household surveys in key areas (energy, food, water).
- **Descriptive analysis** to be published
- **Econometric analysis and policy implications** to be published in mid-2014.





Greening Household Behaviour

Levels of agreement with 3 statements



■ *Environmental issues should be dealt with primarily by future generations.*

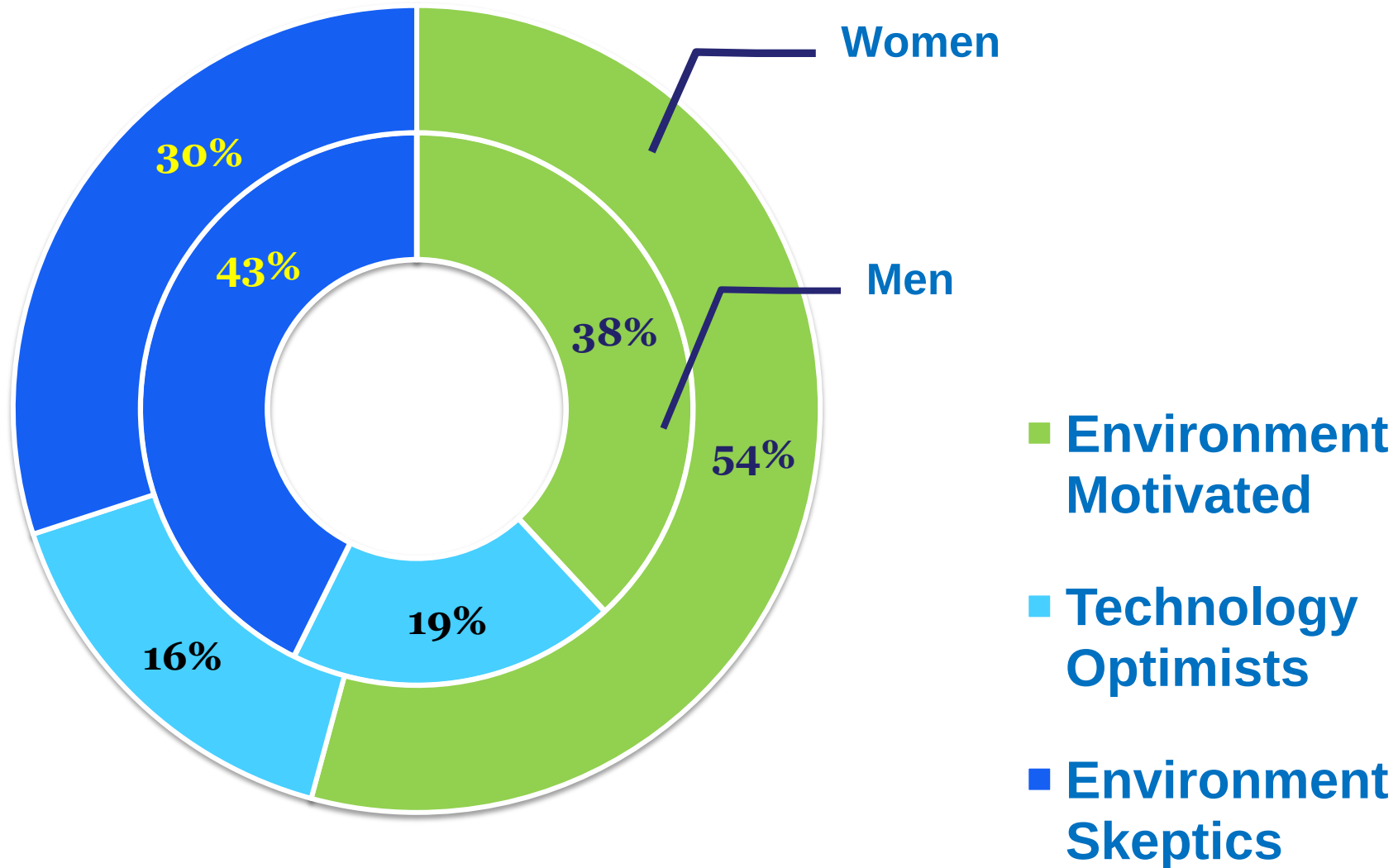
■ *Environmental impacts are frequently overstated.*

■ *Environmental issues will be resolved through technological progress.*



Greening Household Behaviour

Cluster analysis of attitudes





Greening Household Behaviour

The early days of smart meters

New question in the 2nd round of the survey on the provision of **smart meters** allowing households to monitor consumption by viewing electricity usage in real time

- Access to the service
- Interest expressed
- Reported use of the information collected by smart meters

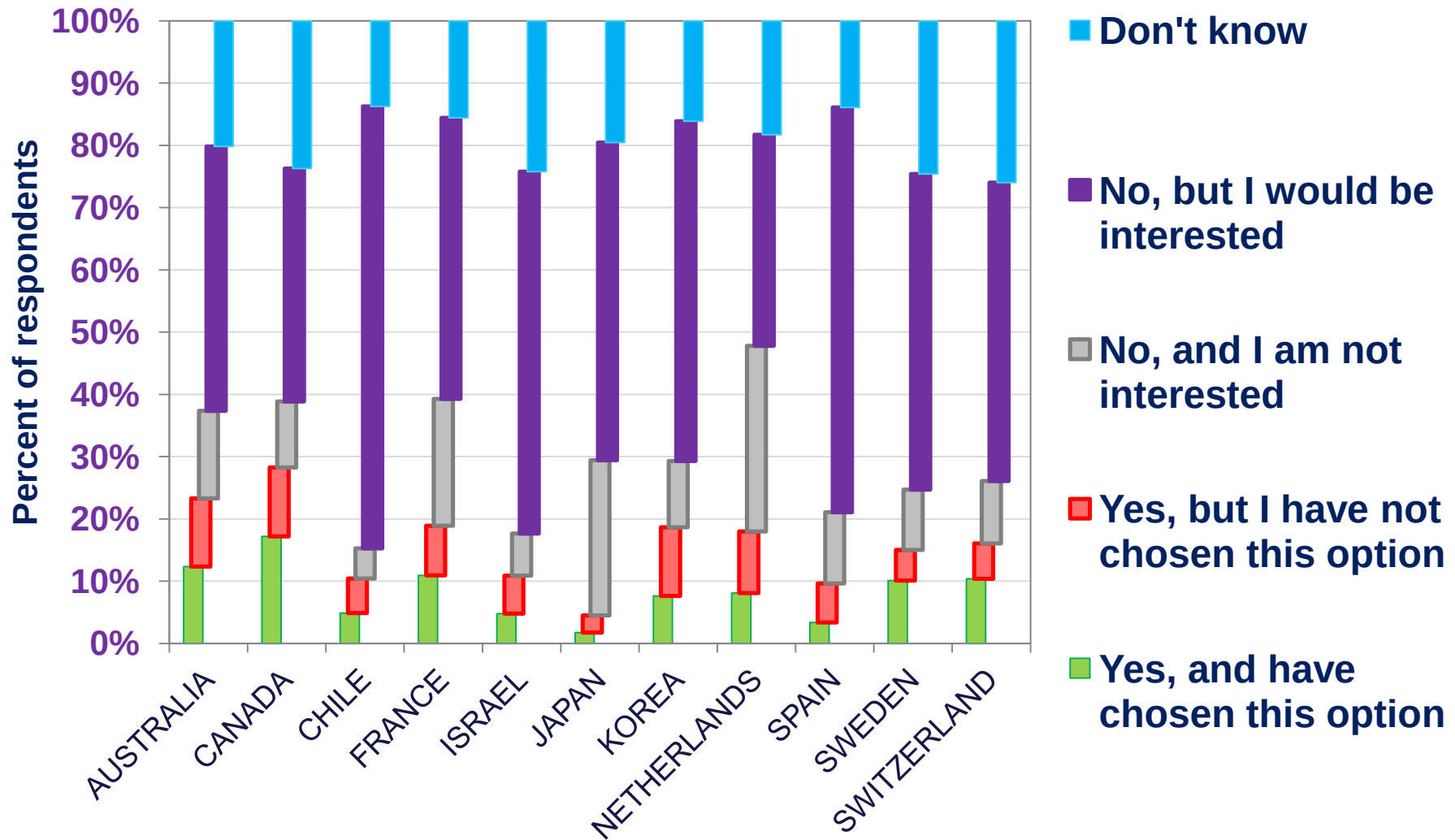
Policy context

- Deployment of smart meters still at early stage in countries surveyed
- Among most advanced: Australia (Victoria-mandatory), Canada (Ontario, British Columbia), Sweden (since 2003)
- *Ambitious objectives: France (2018), Japan (2016), Spain (2018)*



Greening Household Behaviour

Smart meter availability





Greening Household Behaviour

Impact of smart meters?

- **Too early to tell right now...**
- **Econometric analysis** will assess impact:
 - Energy saving behaviour (e.g. turning off lights when leaving a room, cutting down of heating/air conditioning)
 - Investment in energy-saving products
- **Survey question design is critical.** Many respondents unfamiliar with smart meters, and their functions can vary.
- **The Greening Household Behaviour surveys are aiming to provide a platform for observing relevant behavioural-policy trends, e.g. for smart meters.**



Behavioural Econ in Env. Policy

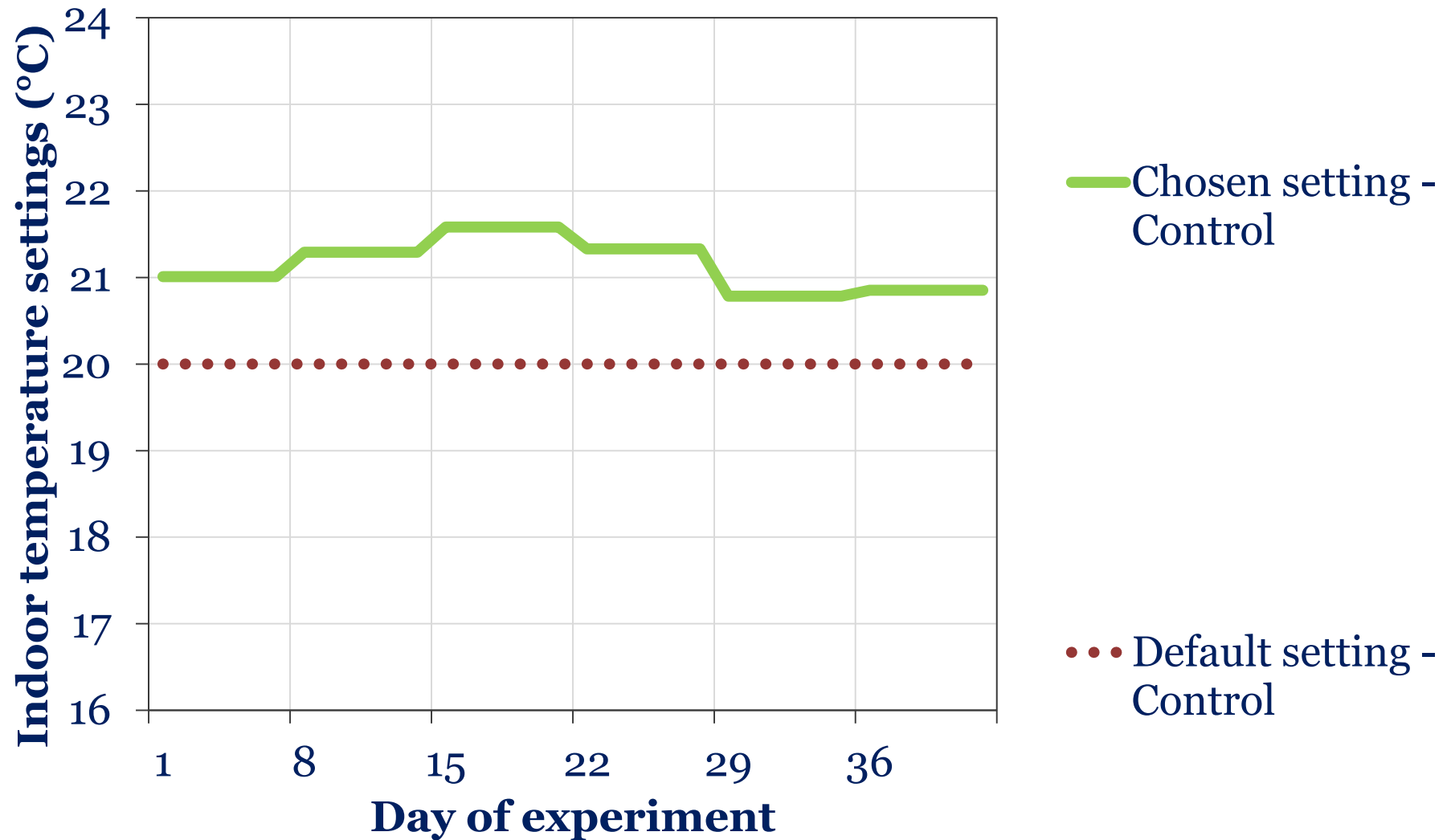
In-house experiment

- OECD office thermostat defaults adjusted down 1 °C per week for a month, starting at 20 °C default.
- Randomized-controlled design allowed clear identification of impacts.
- **Lowering the default to 19 °C decreases building energy consumption more than lowering to 17 °C...**
 - **because of occupant behaviour.**



Behavioural Econ in Env. Policy

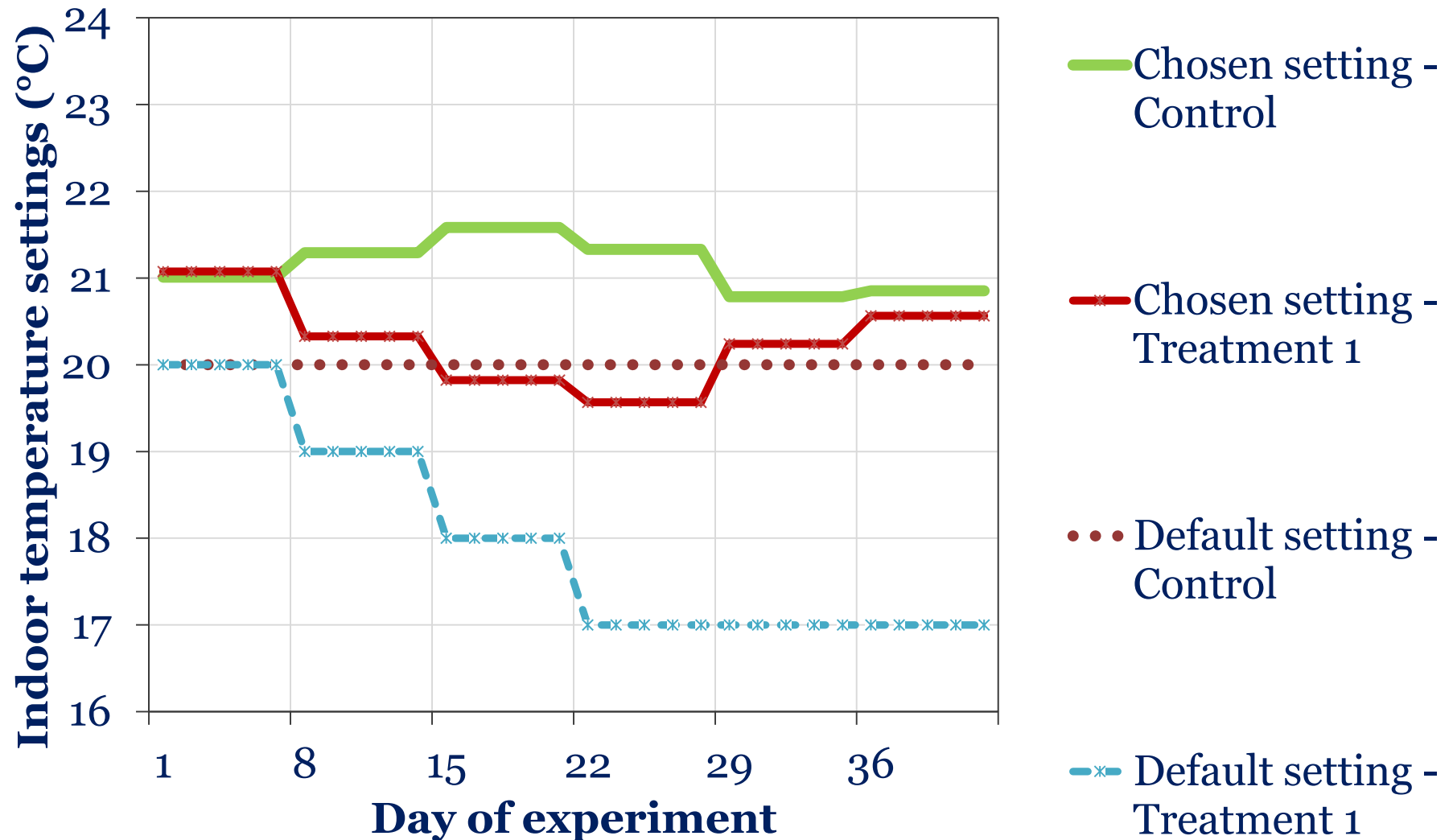
In-house experiment





Behavioural Econ in Env. Policy

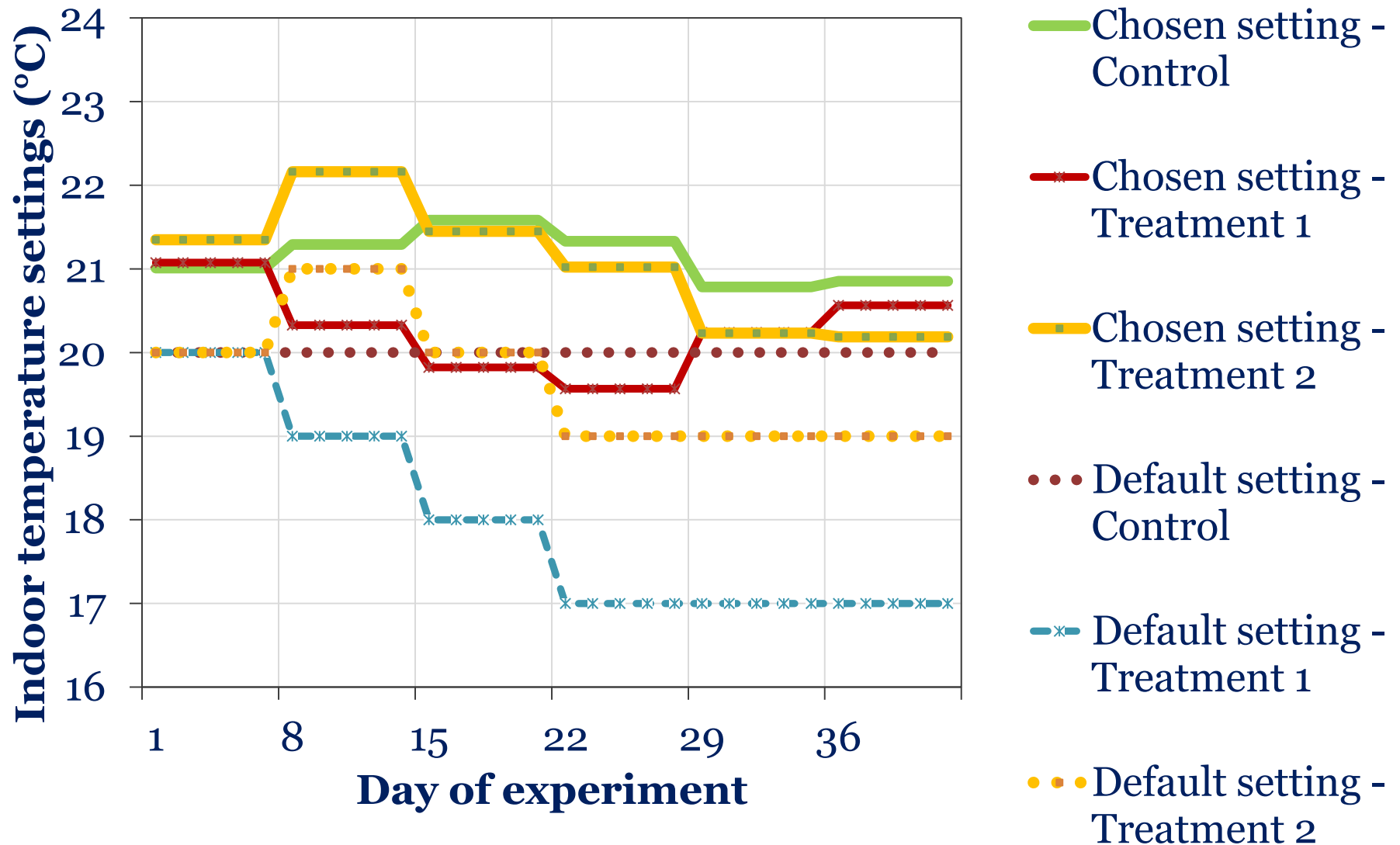
In-house experiment





Behavioural Econ in Env. Policy

In-house experiment



In-country field trials: Beyond Nudges?

- **Commitment devices** for energy efficiency investment and alternative transport modes?
- **Leverage loss aversion:** Give households upfront savings from energy efficiency investments; take away if households do not follow through?



THANK YOU!

BEHAVIOURAL **E**ECONOMICS IN **E**NVIRONMENTAL **P**POLICY

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