<u>Using sample data from ~~Irish~~ smart-type electricity meters to model household occupancy</u>

Like many other National Statistics Institutes ONS recognises the importance of understanding the impact that big data may have on our statistical processes and outputs. So ONS established a Big Data Project to investigate the benefits and the challenges of using big data and associated technologies within official statistics.

The presentation will cover one of the research projects included within the Big Data Project: Investigating the use of <u>Irish</u> trial data from smart-type meters to model household occupancy patterns. Using a retrospective approach, the assumption is that low and constant electricity consumption over a period might indicate that a home is <u>occupied or not</u>~~unoccupied~~. The presentation will cover some of the methods that were investigated to model the likelihood of household occupancy on specific days. An extension to this research is the modelling of the likelihood of long-term vacant properties.

The application for this research will be discussed. Feasibly, small area estimates on the likelihood of homes being long-term unoccupied might be achieved which could make substantial efficiency savings to fieldwork processes in the 2021 Census.

Key words: big data, smart meters, official statistics

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ONS Big Data Project
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