

Pasi Piela

## Mobile network data for travel and seasonal population statistics – Case of Statistics Finland

This presentation summarises the findings and results in applying mobile phone network data at Statistics Finland. This work was conducted as part of the ESSNet Big Data project (European Statistical System) between 2016 and 2018.

The main burdens in applying these data with a huge implementation potential are both the strict European and national legal frameworks.

For both simplicity and direct need of new data tourism statistics were selected as the main target for experiments and the seasonal population as the secondary target. Tourism statistics here refer to inbound and outbound populations.

The complexity came from the data size: the framework populations are formed by all the customers of the operators– either national or roaming customers. In official tourism statistics, monthly events are required, and the actual study covered one year of events.

Within the legal framework the main challenge was negotiations. After receiving datasets some correction rounds were needed. Finally, the data were comparable relatively straightforwardly to the official statistics.

Comparisons proved to be a success, and the need for more formal data production was raised in the end – in order to enrich especially tourism statistics: both inbound and outbound. After all, the new data would enhance/improve survey-based official statistics. However, it would be relevant that all the main operators (currently three) would be cooperative in the future.

**Keywords:** *mobile network data, big data, tourism statistics, seasonal population.*