

Overview of WP3: smart meters pilot

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Outline

- Main conclusions from SGA-1
- Expected outputs for SGA-2
- Current status
- Next steps and future plans
- Communication



Deliverables (SGA-1)

- Report about data access and data handling
- Report about producing statistics with smart meters

Milestones:

- Minutes of the 1st internal work package meeting
- Minutes of the 2nd internal work package meeting

All available in wiki.

Work done in SGA-1

- Linking electricity data with other data sources
 - Unit issues
- Specify target population (coverage issues)
- Develop methodology to produce outputs with regard to
 - households electricity consumption
 - businesses electricity consumption
 - dwellings occupancy
- Evaluate the quality of the outputs.

ES Main conclusions from SGA-1

- The electricity smart meter data has potential as a source for producing business statistics, but the methodology of the linking has to be improved.
- Information about the average consumption by the household size, type of dwelling or any other characteristics of the dwelling could be made available to the public as experimental statistics.
- Vacancy indicator is promising in validation setup. In an ideal case data could be used to improve the main residence address information in the register based census.
- Quality assessment is problematic with regard to precision and coherence.

Challenges

- The description of data source is not detailed enough and metadata about the variables was often missing.
- Address information is not standardized and geo-coding needs lots of resources. Address is the key variable in the linking and the quality of address information is crucial for the successful use of the data source.
- Without additional information it is difficult to identify which metering point records the actual end consumption and which one records transfers of the electricity,

Challenges (cont.)

- The observed unit (metering point in a building) does not match the statistical unit (business, household, dwelling). This leads to the loss of accuracy of the estimates as consumption is assigned to the owner of the building not to the actual consumer.
- Manual metering readings can cause lot of work as is the case in Denmark. Dataset contains dates when the manual readings are reported but no information about period the reported consumption refers to. However, this problem will disappear with complete instalment of the smart meters.
- One metering point corresponds to many consumers and one needs to develop methodology to extract the consumption of the single consumer.

Data access - current status

- EE – access to detailed electricity meters and smart meters data 2013-2016.
- DK – access to 2012-2016 detailed data (separate data files for manual and remote readings). Data delivery once a month.
- SE – aggregated test data from two of the main grid operators, covering two municipalities for 2015 and 2016.
- AT – no access
- IT – negotiations so far that yearly aggregated data should be made available very soon
- PL – detailed test data available, only background data available is region (zip code)

ES Expected outputs for SGA-2

- Report on future perspectives - March 2018
- Report about recommendations regarding access, IT-infrastructure, methodology, data processing, potential statistical outputs and output quality – May 2018
- Two milestones: Minutes of the face-to-face meetings

Report on future perspectives

- Identifying the possible uses of the smart meters data (excluding the outputs covered in SGA-1).
- Other smart meters than electricity ones.
- Different levels of aggregated data – cost vs quality analysis.

Uses to be covered in the report

- Electricity consumption by accommodation businesses and its relationship to tourism measures
- Vacant dwellings: estimates of total number per region, per season. Use of classification methods for identification.
- Energy use on NACE by establishments.
- Number of new buildings under construction and to be constructed (city planning)
- Study of businesses and households that switch the electricity provider
- Creating a register based on electricity dataset and updating it with other sources

Other smart meters

No access to data but overview of technology and our view to the possible use in official statistics:

- Water, gas meters
- Heating/cooling smart meters
- Sensors as weather stations
- Device specific consumption e.g fridge, tv or smart plug
- Sensors in farming (precision measures)
- Garbage sensors/readers



Different levels of aggregated data – cost vs quality analysis

Cases to be analysed:

- Detailed data with background information i.e. full information case
- Aggregated data (monthly or annual) with background information
- Detailed data but no background information
- Survey data



Communication

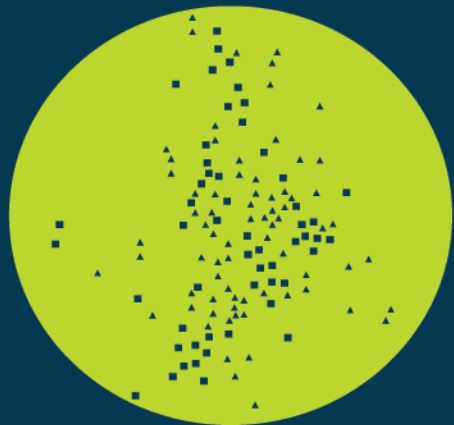
- First face-to-face meeting in Copenhagen 19-20.09.2017
- Second face-to-face meeting in the beginning of February 2018 (location to be decided).
- Regular WEBEX meetings in every two weeks on Wednesdays
- All content will be added directly to Wiki space, editing also in Wiki.
- Presentation on Seminar „Big Data Matters – Towards Smart Statistics“ in Heerlen (Sept 2017)
- Presentation on conference „Small Estonia, big Europe – what do statistics show?“ in Tallinn (Oct 2017)

Discussion point

What are Eurostat's expectations regarding the cost-quality analysis?

Difficulties with regard to costs:

- implementation vs. in production (no experience with latter)
- infrastructure, access costs and costs for hours spent for processing are country specific



objekte kokku n 129
kolmnurki n 74
nelinurki n 54
ring n 1