

The changing data landscape and official statistics. Innovative data collection. Using Big Data for official statistics

Natalie Rosenski (Federal Statistical Office of Germany, Germany)

natalie.rosenski@destatis.de

Abstract

Regarding the improvement of timeliness, accuracy, relevance and the reduction of response burden of official statistics, the exploration of the use of new digital data (also known as big data) for official statistics is essential. For this reason, Destatis examines different data sources, such as mobile phone and remote sensing data as well as the extended use of the Internet of Things (IoT) in order to produce trusted smart statistics. The goal of all these studies is to get a more comprehensive picture of the society and the economy, ideally through the combination of survey, administrative and new digital data.

In order to analyze the use of big data for official statistics, Destatis strongly participates in the ESSnet on Big Data II and leads one of the 12 work packages, that is WPL on 'Preparing Smart Statistics'. WPL examines the topics 'Smart Farming', 'Smart Devices', 'Smart Cities' and 'Smart Traffic' and aims to explore how the digital footprints of daily life created by human wearables, city and vehicles sensors and other smart systems could change the way to produce trusted smart statistics taking advantage of societies' datafication.

In cooperation with other National Statistical Institutes, the German Aerospace Center and the Federal Agency for Cartography and Geodesy, the Institute for Research and Development of Destatis is involved in several feasibility studies that explore the use of remote sensing data for the observation of economic activity, the detection of solar panels as well as the combination of official statistics and remote sensing data to analyze different questions such as the urban quality of life e.g.

Furthermore, since the end of the year 2017 and also in cooperation with other Statistical Institutes and two mobile phone providers, the Institute for Research and Development of Destatis explores the use of mobile phone data for population statistics, for estimating the unemployment rate of small areas and for the improvement of commuter statistics.

The presentation will highlight the preliminary results of the different feasibility studies.

Keywords

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