Workshop on the use of mobile positioning data for tourism statistics

Prague (CZ), 14 May 2014

The use of Big Data for statistics

EUROSTAT, Unit G-3 "Short-term statistics; tourism"

What is the role of official statistics today?

*'….To provide an **indispensable element** in the **information system** of a democratic society, serving the government, the economy and the public with data about the economic, demographic, social and environmental situation….'*

*[Fundamental Principles of Official Statistics; principle 1 on **Relevance, impartiality and equal access**]*

Is this role changing in a big data environment?

- The **role** does not change *as such,* but the **information system** is rapidly changing

- NSIs are not anymore the main data providers

- Big Data inevitably requires *transformations* in NSIs:
  - **cultural, organisational**
  - eventually transiting towards **new tasks and responsibilities**

Cultural & organisational transformations in NSIs

- Big data is more of a **corporate culture** and **organisational behaviour** than anything else

- NSIs (slowly) **embrace** big data as part of **'greater statistics'**

- NSIs create "big data labs" and seek partnerships with private stakeholders ('owners' of the big data)

- The European Statistical System (ESS) is committed to a big data strategy with action plan and roadmap

- The global statistical system is launching an international partnership in the framework of the Post2015 development agenda, etc…..

What will change?

- **Accreditation** and **certification** may become core tasks of NSIs

- **Statistical modelling** will be a main activity of NSIs

- From descriptive indicators to **nowcasting** and **forecasting**

- Re-thinking surveys and censuses in terms of reality mining - it will be difficult to justify a 'traditional census of population' in the post2020 rounds

What will change?

What is happening within the ESS?

- **"Scheveningen Memorandum"**, September 2013
  - Adopted by the heads of statistical offices of the EU:
    - ☞ a high level formal commitment to jointly address the challenges and opportunities of Big Data and it will provide NSIs and Eurostat with the necessary legitimacy for actions in this regard.
  - Development of an **Action Plan** on the integration of Big Data in official statistics (by mid 2014)
  - Incorporation of the Action Plans in the ESS' annual work program

What is happening within the ESS? (2)

- Set up of an internal **Task Force on Big Data** at Eurostat (2014 - 2016)

  - ☞ to lead and co-ordinate developments within the ESS and the Commission with regard to maximising the potential of Big Data for Official Statistics and evidence based policy making

  - ☞ the overarching operational objective of the Eurostat TF is to develop — together with all members of the ESS — an *ESS Big Data strategy* along the lines of the Scheveningen Memorandum

  - ☞ first 'action': creation of an ESS Task Force on Big Data, composed of NSIs but in partnership with other international organisations (OECD, UNECE), Commission services (DG CNECT) and academics)

  - ☞ current approach of the Eurostat Task Force: network building (including public-private partnerships), cooperation at international level (e.g. Big Data Project, with UNECE), stock-taking and transfer of know-how & skills, exploring concrete areas of application (including methodological issues such as coverage or completeness)

What is happening within the ESS? (3)

- Preliminary work/projects (before the TF was created):
  - Feasibility study on the use of **mobile positioning data** for **tourism statistics** ☺
  - The internet as a data source
  - Using webscraping technology for consumer price indices

- Current Task Force activities on **(potential) projects**:
  - Using geo-location data from mobile phones to estimate **population grids**, migration and other population-related topics
  - Using scanner transactions data for developing short-term estimates of **household budgets**
  - Using Google search results for producing **job search** and **unemployment** related estimates

Thanks for your attention

Eurostat Task Force on Big Data:

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